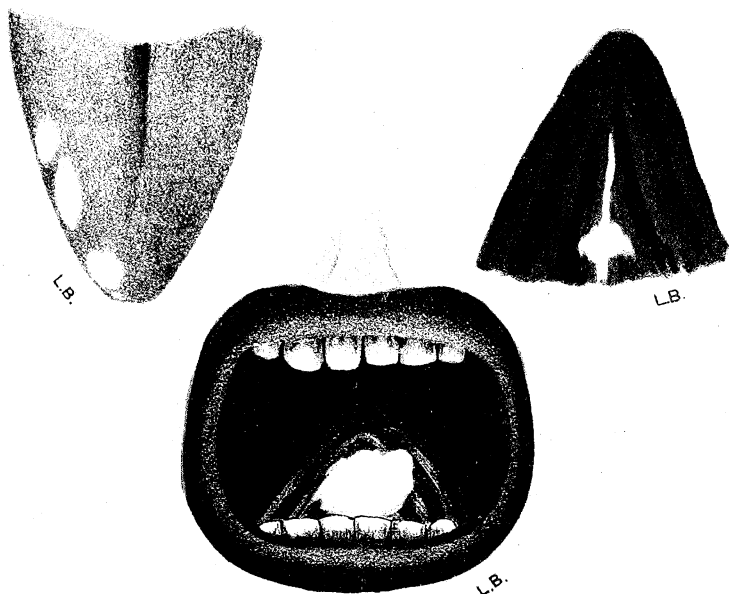


PLATE J.



FIGS. XXXV, XXXVI, XXXVII. ULCERATIVE STOMATITIS.
(COINCIDENT WITH WHOOPING COUGH)

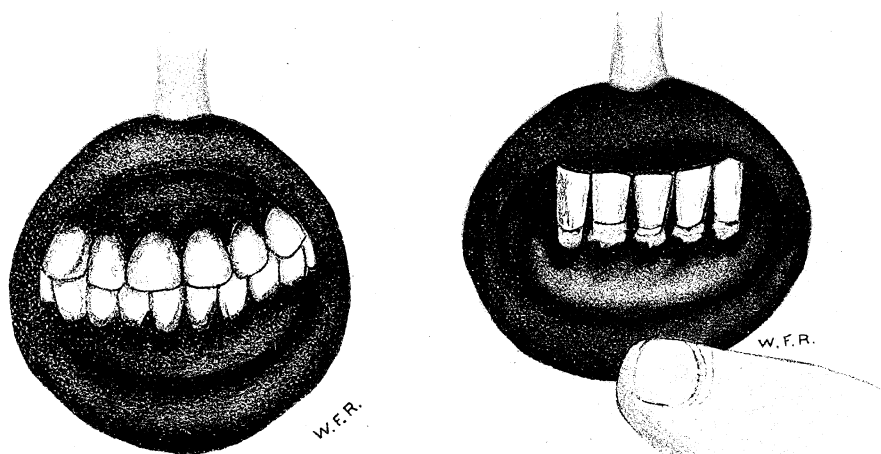


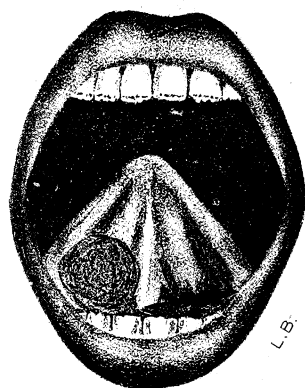
FIG. XXXVIII. GINGIVITIS.

(CAUSED BY PILOGARPINA AND SALTS)

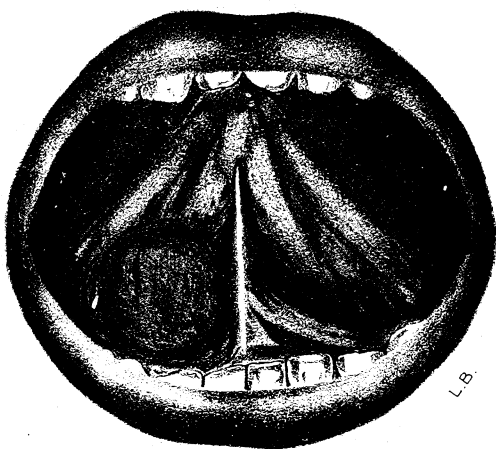
FIG. XXXIX.

MERCURIAL STOMATITIS.
(FOR MERCURIAL GINGIVITIS SEE FIG. XXV)

PLATE K.



L.B.

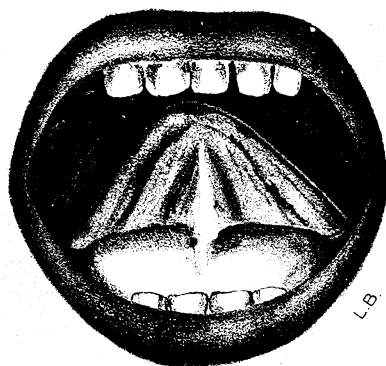


L.B.

FIGS. XL, XLI. RANULA (child and adult)



L.B.



L.B.

FIGS. XLII, XLIII. SIMPLE OR RETENTION CYSTS (adult and child)

ITEMS OF INTEREST.

VOL. XV.

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NO. 6.

ORIGINAL COMMUNICATIONS.

ORAL DISEASES;

SURGICAL AND NON-SURGICAL.

By W. F. Rehfuess, D.D.S., and L. Brinkmann, M.D.

[CONTINUED FROM PAGE 263.]

ULCERATIVE STOMATITIS.

PLATE J.

The Figs. xxxv, xxxvi, xxxvii represent a form of stomatitis peculiar to whooping-cough; it is *only* found in children who have teeth, and is peculiar to one of three sites, *viz.*: on the free border of the tongue, on the under surface, or on the frenum. It is produced by the impact of the tongue against the teeth during the paroxysms of coughing. In appearance the ulceration may present a clearly defined outline as seen in Figs. xxxv and xxxvi, or it may fade away into the surrounding normal mucous membrane (Fig. xxxvii); the surface of the ulcerous patch may present either a whitish or a yellowish surface, slightly depressed. The treatment for such a condition is, first, to prevent extension by continued impact; second, to keep the mouth clean; third, if necessary, to stimulate the ulcerated patch or patches with either nitrate of silver, 20 grains to the ounce of water, or with a bluestone (sulphate of copper) pencil.

To prevent the impact of the tongue against the sharp edges of the teeth, they should be covered with gutta-percha, this to remain till the paroxysms of coughing are overcome, or till they become much less violent. To keep the mouth clean, listerin, peroxid of hydrogen, chlorate of potash, boracic acid, or borax with honey may be used. If the patches require stimulation, care should be taken not to use either too strong a solution or too often. Once in two or three days will be quite sufficient.

PILOCARPIN GINGIVITIS.

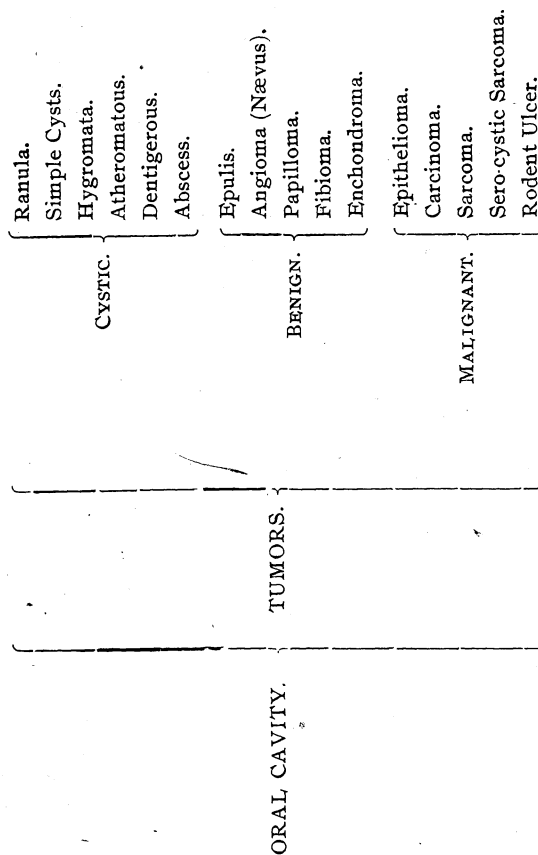
The physiological effects of a dose of pilocarpin does not spend its force entirely on the general system; following the exhibition of this drug a distinct form of stomatitis is produced peculiar to it. The effect may be only temporary while the salivation continues, but it may remain after all the other natural phenomena have disappeared. The first effect of an ordinary dose of pilocarpin is noticed in the mouth, when the normal secretions are found to be exaggerated and when the general sweating produced by the drug fails to make its appearance; the action of the drug spends its force on the salivary gland, producing ptyalism or salivation. The mucous membrane, which probably has been pale, becomes suffused, and finally takes on a distinct scarlet color. As the action of the drug becomes less pronounced, there is a corresponding change in the color of the buccal mucous membrane, which becomes normal when the pilocarpin has been eliminated, either by the mouth, skin, or other avenues. (Fig. xxxviii.)

MERCURIAL STOMATITIS.

When, as the result of continued mercurial medication after mercurial gingivitis has taken place, ulceration follows, a condition is found, as illustrated by Fig. xxxix, plate J. Here is shown the zone of ulceration, embracing the insertion of the teeth into the alveolus. There is also a deepening of the normal color of the alveolar mucous membrane. Pus will be found to exude from around the part on pressure, and salivation, to some extent, is present. For the relief of such conditions, it will be found necessary to discontinue the use of mercurials, and to apply treatment locally in the shape of those used in an ordinary case of stomatitis, *viz.*: Boric acid, borax, listerin, peroxid of hydrogen. To keep the mouth clean, it may also be necessary to apply some stimulating solution to the ulcerated surfaces, such as a solution of argentic nitrate, or a dilute solution of sulphate of copper.

The surgical section of these articles will contain all the latest discoveries bearing on the subject. The illustrations will be descriptive of the more common form of surgical affections met with. Monstrosities, giant tumors, and rare cases, such as are shown in text-books, will be avoided, as they would be foreign to our purpose. The authors, for convenience of comparison and systematic arrangement, present the following classification of the surgical oral diseases:

SURGICAL ORAL DISEASES.



DISEASES OF THE BONES AND NERVES.

- Ranula.
- Simple Cysts.
- Hygromata.
- Atheromatous.
- Dentigerous.
- Abscess.
- Epulis.
- Angioma (Nævus).
- Papilloma.
- Fibroma.
- Enchondroma.
- Epithelioma.
- Carcinoma.
- Sarcoma.
- Sero-cystic Sarcoma.
- Rodent Ulcer.

RANULA.

(Plate K, Figs. xl,xli.)

The term ranula is applied to a cystic swelling beneath the tongue and to the side of the frenum. In appearance it is bluish in color, translucent, bulging the mucous membrane upward. A few small vessels may be seen crossing it; occasionally it is bilocular. In such cases one cyst lies behind the other. There are no cases on record where ranula is symmetrical. Ordinarily it has no connection with the salivary glands, nor with the ducts of Wharton leading from them, but is a collection of glairy mucus in an obstructed follicular gland in the floor of the mouth. The obstruction is caused either by an inflammatory process or by a concretion impacted in the duct of the follicular glands. The lining membrane of these cysts is of the columnar epithelial variety.

Simple incision or puncture only relieves the condition for the time being. The removal of a small portion of its containing sac likewise will fail to produce a permanent result. As soon as the cyst is evacuated its sides collapse, and the opening made into it reunites, after which it again becomes distended. The radical treatment for this condition is by a seton, or dissection, and entire removal of the cyst when the seton fails.

To introduce the seton, the ranula should be hooked up with a tenaculum, while a curved needle, armed with silver wire, is passed through the ranula. The ends of the silver wire are carefully twisted to prevent loosening from the movements of the tongue; silver wire is preferable as it does not absorb the fluids of the mouth (as silk would), and become putrid. Should the seton fail, it is then proper to carefully dissect out this retention cyst. A few small vessels are met with, the largest of which would be the ranine artery. These should be tied with silk ligatures, and the wound allowed to fill by granulation. The mouth must be kept aseptic by proper mouth washes.

SIMPLE CYSTS.

Simple or retention cysts are found in the floor of the mouth. Unlike the ranula they are not confined to one side, but usually involve the entire floor. These cysts may attain great size, pushing the tongue well up into the mouth, and also showing their presence in the sub-lingual region of the neck, as a distinct enlargement. At times they have been mistaken for that condition of the superficial fascia, bulging out the skin and known as double chin. The mucous membrane covering simple cysts is slightly paler than the

surrounding membrane, but has all its characteristics. It is firm to the touch. By palpitation with one finger in the mouth, and the other hand over the tumor outside, a percussion wave may be at times elicited. The fluid contained therein differs materially from that found in ranula or cystic hygroma. In the former glairy mucous makes its escape when opened, in the latter it is of a serous type.

The contents of a simple cyst is salivary fluid, and more often associated with obstruction in the ducts of Wharton, occasioned by an inflammatory process or by the impaction of a concretion (stone) in the duct. If the obstruction is caused by a concretion, an attempt should be made to extract it by a simple incision, and at the same time to eradicate the cyst.

It would, however, be more convenient to remove the cyst by dissection. It should first be punctured, to allow its contents to escape, after its sac wall has been exposed, as it gives greater room for manipulation and allows the structures surrounding it to resume their normal relations.

If the cyst be small it could be removed through the mouth; in the large varieties the incision for its removal should be below the border of the inferior maxillary. The cyst gradually exposed by dissecting away the structures overlying it, care being taken not to injure the hypoglossal nerve or the lingual artery.

There is always some interference to breathing, occasioned by the necessary manipulation and pressure during the removal of large cysts.

In one case (Fig. xliii) recently witnessed by the authors, the surgeon removed the cyst by an external incision; after exposing the cyst wall, and on attempting to remove it without evacuation, the increased pressure on the nerves occasioned dyspnoea, the patient's face became blue, respiration embarrassed and finally ceased, only to be restored by prompt evacuation of the cyst and the application of the battery (Faradic), one pole applied to pneumogastric nerve at its point of exit from the skull, the other over the diaphragm. At each application of the sponge to the diaphragm there was a corresponding filling of the lungs with air; after fifteen minutes normal respiration was restored.

When removing these cysts by the external incision, the most thorough antisepsis should be employed to prevent infection of the wound; while removing the cyst the wound should be constantly flushed with some antiseptic fluid. If bichlorid of mercury, 1-2,000 solution be used, care must be taken not to allow it to escape into the mouth, as it might cause salivation, or even fatal intoxication.

Attacking these cysts by an incision into the floor of the mouth after their removal, the mucous membrane may be brought together by silver wire, and clamped with shot; frequent irrigation of the mouth, with some antiseptic mouth wash, should be employed. In such cases the authors usually use a wash of a 10 per cent. boric acid solution with listerin. Fluid diet must be administered for at least a week, to allow the parts to thoroughly unite. Movements of the jaw should be restricted to accomplish this.

CASE I.—Child, aged 10 years. First noticed a swelling in the floor of the mouth two weeks previous to her admission into the hospital. The swelling, on examination, presented the appearance of a small simple retention cyst, with a clearly defined outline. It offered but little resistance to the touch.

The cyst was removed by dissection, the only vessel of any size and requiring ligature was the ranine artery. The wound was thoroughly mopped out with a ten per cent. solution of equal parts of borax and boric acid, the edges of the wound were brought together with silkworm sutures and clamped with shot. Movements of the lower jaw were restricted by the application of a Barton's bandage; a mouth wash of equal parts of peroxid of hydrogen, listerin, and water was ordered every two hours. The stitches were removed a week later, union being perfect throughout.

CASE II.—A. J., aged 23 years, was admitted into the hospital with a large sublingual retention cyst, which had been present for two years, gradually increasing in size, painless, and causing but little interference with mastication.

The removal was effected as in Case I, through the mouth. After the upper surface of the cyst had been exposed by dissecting off the mucous membrane, it was punctured and evacuated; the sac wall was then freed and removed by dissection, the hemorrhage was controlled by ligatures of catgut, and the wound treated as before, with silkworm, gut and clamped with shot. The after treatment was carried out as in the above-mentioned case. The wound united kindly, and the stitches were removed on the tenth day, perfect union having been established.

HYGROMA.

Hygroma is always found as a congenital tumor. It exists either as a simple or a multiple cyst, though it as often occurs as a fusion of the lymph spaces, and forms large irregular masses. When found as one large cyst its wall is thin, smooth, and the fluid contained is colorless.

Where the cysts are multilocular their compartments are rarely larger than a small-sized walnut. As these are so often found rather diffused they form an illy-defined mass, it is therefore at times impossible to map out their limits; they always make their appearance during infancy, and may remain quiescent for a long period, but when actively secreting fluid they grow with surprising as well as alarming rapidity.

The floor of the mouth is particularly prone to this form of cyst, where it takes its origin in the fibrous tissue, and has been mistaken for ranula. The cells lining the cyst wall are the same as those found in the lymphatic vessels, *viz.*: endothelial. Where hygroma exists as an exaggeration of the lymph spaces, the size may vary anywhere from that of a good sized orange to a kernel of wheat; their borders gradually become fused with the surrounding structures. On opening the cyst the wall collapses, and its appearance on dissecting it out has been likened to that of a sponge. Single hygromatous cysts have also been called hydrocele.

Hygroma at times cease to grow, and disappear spontaneously, like angioma, as the result of an idiopathic inflammation. Unless special indications call for its treatment, such as pressure on important nerves or veins, or causing interference with respiration or deglutition, they should not be interfered with.

The following form of treatment has been suggested by Owen: If the cyst be of the multilocular variety, one or more of its compartments may be evacuated at one sitting, without an anesthetic. This should be done from time to time if indicated, to excite adhesive inflammation, and, as the skin resumes its normal relation, it is possible to map out other cysts.

If the cyst keeps refilling it is then proper to introduce some irritating material, tincture iodin, into the cavity after evacuation. Should this fail, a few strands of silk passed through the hygroma to form a seton may be used (though not devoid of danger), and left in position till enough inflammation has been excited. The danger from the seton lies in the exhaustive suppuration which follows, and may even result in pyemia or septicemia.

To remove hygroma by dissection may prove disastrous; as a rule, not having a containing wall, blood vessels, nerves and important muscles might be contained within its outgrowths.

ATHEROMATOUS OR DERMOID CYSTS.

Atheromatous or dermoid cysts exist in the floor of the mouth occasionally, presenting a tumor whose surface is not lobulated,

the membrane covering it of a yellowish color, usually confined to the center of the floor, though it may be found on either side. It is apparently freely movable, though on its removal it is found to be universally adherent. Dermoid cysts originate in fetal life, and as the result of an incomplete closure of the branchial fissure. Its contents are composed of a pultacious, cheesy mass, in which are sebaceous matter, cholesterin, hair, and sometimes even teeth; also broken-down epithelia cells. These are less frequently found in this region than in any other parts of the body.

This form of tumor has been often mistaken for a chronic or cold abscess, and opened with the expectation of evacuating pus. It has also been mistaken for a simple cyst, as well as ranula. These cysts attain at times large dimensions, involving the entire sublingual region, and presenting as low as the hyoid bone.

There is a great difference of opinion as to the proper method of disposing of such a condition. It is manifest that its removal with the contents in situ, the same difficulty would be experienced as in the removal of simple cysts. Therefore, as soon as the nature of its contents is discovered it should be evacuated at once, and, if it involved a very large territory, its sac might be cauterized with the actual cautery, or a 10 per cent. solution of chlorid of zinc, and allowed to granulate. To deal with these cases in the open method, they require a very protracted course of treatment. We therefore believed that dissecting out the sac of such a tumor would offer the best means of relief. In its favor there is the thorough obliteration of the sac wall, prompt union, if done with antiseptic precaution. If the dermoid cyst be small, its removal through the mouth, unopened, could be easily accomplished. These cysts are more deeply situated, and, as important structures are involved, the surgeon should allow himself plenty of room to facilitate the removal, as well as meet any complication that might arise.

DENTIGEROUS CYSTS.

Dentigerous cysts are complex in character, having for their contents both the constituents of a simple retention cyst and dental structures, originating usually from a tooth impacted in the jaw or an imperfect tooth. Teeth may become impacted and still not cause the formation of a cyst.

The causation of such a cyst may originate in the displacement of a tooth germ, and thus present after development and its eruption through the gum; and further, the fluid within the capsule of

the tooth may increase to such an extent so as to distend it and involve the surrounding structures.

The teeth found in dentigerous cysts are imperfectly developed, the crown usually complete, but the fangs small and aborted.

The temporary teeth are seldom, if ever, found contained in these cysts, and where the permanent teeth are at fault the milk teeth are retained and are slower in shedding. The size of dentigerous cysts vary from a hazelnut to that of a small egg. The direction in which they grow depends on the amount of resistance met with. They are at times found in the antrum of the Highmore, completely filling it. As a rule, little pain is experienced, though it may be associated with bone expansion. On palpation the bone will be found to bulge outward, and offers to the touch the sensation of fluid. Deep pressure may elicit crepitation like that found in osteo-sarcoma, the so-called egg shell crackling or similar to the doubling of parchment. To render the diagnosis complete, aspiration of the cyst and exploring with a probe may disclose the missing tooth. Masses of enamel and dentine not recognizable as a feature of any tooth are found. It is not essential to have a tooth present in cysts of this variety, but any dental constituent will mark it as one of this type.

Free incision into the containing sac is advised, and at times it is necessary to chisel away the bone covering it. Either packing the cavity or painting it with iodine or chlorid of zinc is employed, dependent on the size of cavity.

This operation should, if possible, be done through the mouth to prevent disfigurement.

ABSCESS.

Abscess of the floor of the mouth other than the result of caries, necrosis, or dental inflammation is exceedingly rare. It has all the phenomena observed in abscess of other parts of the body, viz.: Pain, heat, fluctuation, and a distinct sensation of pulsation. This is treated by early evacuation and the use of antiseptic mouth washes.

(To be continued.)

Drs. Ch. Godon and Ronnet have been appointed by the French Minister of Public Instruction to study the organization and work of dental schools and societies in the United States. Both are connected with the *Revue Internationale d'Odontologie*.

MISSISSIPPI DENTAL ASSOCIATION, 1893.

Reported for ITEMS OF INTEREST by Mrs. J. M. Walker.

The nineteenth annual session of the Mississippi State Dental Association was a very important one from the fact of its being the first meeting of the Association and the Board of Dental Examiners since the adoption of a new constitution and the enactment of a new dental law.

The meeting was held in the Senate Chamber of the State Capitol, Jackson.

After an opening prayer by Rev. Jno. Hunter, rector of the Church of the Advent, the Association was most cordially welcomed by the Mayor of the city; the response to the address of welcome being made by Dr. J. B. Aiken, one of the founders of the Association, its first Secretary and Treasurer and second President.

The President, Dr. A. A. Dillehay, in his annual address, dealt in plain and forcible terms with some of the glaring evils now threatening the prosperity of the profession in the State. He had been accused of riding some hobby at each meeting of the Association; admitting the fact, this time his hobby would be

DENTAL ETHICS.

Briefly outlined, he wished that every dentist would read and reread the code of ethics until it became so impressed on his mind that every violation would gnaw at his conscience till repentance should produce regeneration. The "advertising dentist," and the man who "cuts prices" were severely dealt with. Quoting from the Presidential address before the Louisiana Society in 1886, the advertising dentist was described as not a modest man; not a contented man; not an upright man; but an unprincipled man; an arrogant man; a conceited man; a selfish man, and a dishonest man. The reason for each charge was elaborated. He suggested the formation of a Standing Committee on Grievances and Complaints, to investigate all violations of the Code of Ethics, and to aid the Board of Dental Examiners in purging the State of empirics and impostors.

In the afternoon session of the first day, the roll of sections was called, the Chairmen, as a rule, not being prepared with their reports. This gave rise to a discussion of the best modes of securing papers for our meetings. Discussions of topics are productive of much good, but the presentation of a subject in a properly

prepared paper, with some one familiar in advance with the leading points prepared to open the discussion, would be far better.

Dr. J. D. Killian, Greenville, then read a paper on the importance of a knowledge of

PHYSIOLOGY AND HISTOLOGY

to the dental practitioner. He spoke of the present as an age of industrialism. Dentistry has advanced rapidly in manipulative measures, and the mechanical aspect of dentistry has been brought to a high state of perfection. The leading thought of his paper was that a higher standard requires a thorough and practical knowledge of the functional activities of man and his structural development, through the study of physiology and histology. The average college student does not obtain sufficient grasp of these subjects, and does not expect to reap any practical benefit from these branches, which he studies merely because the faculty requires it as a stepping stone to his diploma—the sole object of his ambition. But without a knowledge of these subjects we may be dental laborers; dental workmen—never doctors of dental surgery.

Dental college graduates are entitled to administer general anesthetics, yet how many can explain the action of chloroform, ether, nitrous oxid, or cocain, and by what means they cause insensibility? How many have a clear idea of the relation the fifth-pair of nerves bear to those governing the heart's action, and why the danger incurred in giving an anesthetic is greater when they are involved? We speak glibly of the absorption of the roots of the deciduous teeth, but how many can explain the nature and functions of giant cells, or the different processes by which nature removes from the body "that which cannot be made useful and does not participate in its functions?"

We know that we invite structural changes by the premature extraction of deciduous teeth, yet how many of us perform operations that will free us from immediate difficulty, regardless of remote consequences?

We have perhaps arrived at the pinnacle of achievement in mechanical dentistry, but it behooves us to save the natural teeth, and to do this we must familiarize ourselves with their structural development, through a more thorough knowledge of anatomy, physiology and histology; these form the bedrock on which we should lay the foundation stones of success as scientific practitioners of conservative dentistry.

This paper was discussed at some length by Profs. Peabody, of Louisville, and Morgan, of Nashville, honorary members of the association, who characterized it as a valuable contribution and worthy of serious consideration, especially by the younger members of the profession, if they would be in the van of advance in progress of dentistry.

Prof. Peabody in his long experience as a teacher of these branches, had found them the most difficult of comprehension by the average student. It was hard to gain their attention, or excite their interest, because they failed to grasp the practical application of the knowledge gained with so much difficulty. He said there is no more complicated subject than the origin of the dental structures, because they rise from two distinct tissues—epithelium and connective tissue; organic and calcific tissues combined in one organ. The stereopticon now renders great assistance in making the subject more comprehensible, as by its aid we appeal directly to the eye.

But many young men say—"I don't see what the physiological structure of a tooth has to do with filling a cavity or making an artificial denture." Now, while it is true that a skilful operator may perform the mere mechanical manipulation of filling material, and make a beautiful contour restoration, yet if ignorant of pathological conditions and they work entirely in the dark.

Dr. Morgan felt considerable pride in the production of this paper, because he had helped to teach the young author, and it was the direct outcome of the precepts he endeavored to instill into his young men—namely, when you go home after graduation, go right into your local Association, resolved to work there. To do this intelligently, select some particular subject at the beginning of the year, and through the year post yourself on it through the journals and the standard literature of the profession. Then, just before your Association meets, consult the notes you have made through the year, and write on that subject, covering only the ground you have well studied. Prepare yourself for the discussion which may follow your reading, and be ready to defend your position by reference to the authorities. This will soon give you standing in the profession. The present paper is a good sample of the results of my teaching.

We practice the healing art very much in the dark, unless we know something of pathology and histology. Any treatment that is not based on a knowledge of the structures involved is empirical and mechanical. To know the nature of a disease, we must under-

stand pathology ; to know the function of an organ, we must know its histology.

Dr. Morgan spoke at some length of Nature's three methods in the removal of foreign bodies, namely :

1st. By absorption, the tissues being broken down, liquefied, and passed off through the emunctories, as is done with the roots of the deciduous teeth.

2nd. By a process of inflammation the surrounding tissues are broken down, and by muscular contraction they are forcibly rejected, as in the case of a splinter.

3rd. They are encysted. Nature builds up around them a shell of connective tissue of fibrous character, low in organization and not irritable or subject to inflammation. When a large abscess is forming at the apex of a root, the bony structure around it is broken down, and carried off to make room for the abscess sac, which is often of considerable size. When the abscess has been cured, this abnormal encysting tissue fills in the space around the apex of the root, hugging it closely and holding it firmly in position again. Not being of an irritable character the presence of the dead root, even though denuded of periosteum is seldom the cause of disturbance. It is the only instance in the human system where the contact of living soft tissues with devitalized tissue is tolerated.

Dr. Morgan said he believed the teeth successfully implanted by the "younger method" were retained on this principle. The root is encysted, the fibrous tissue penetrating all the interstices of the root structure, even the canals. We must learn to measure the recuperative powers of our patients before attempting such operations. The strumous, cachexic diathesis takes on inflammation easily. In the scrofulous and the negro race, and especially the mulatto, the tissues are soft and prone to destructive action ; abscesses are large and run their course rapidly. We may preserve the front teeth, but never the back teeth if they have abscessed.

On motion of Dr. K. S. Moffat, a vote of thanks was tendered Dr. Killian for his suggestive paper.

A committee to raise funds for a monument to the late Dr. Louis Thomas, has been formed in Paris. Those desiring to contribute toward thus honoring the memory of the lamented professor, are requested to address their subscriptions to Dr. Viau, Treasurer, 47 Boulevard Haussman, Paris, France.

A NEW METHOD OF CLASPED PLATES

vs.

MOVABLE OR UNMOVABLE BRIDGE-WORK.*

Dr. W. G. A. Bonwill, Philadelphia.

Time, with experience, levels all things. How our practice will be changed if truth is uppermost!

I am surprised at the many somersaults I have made in forty years. Because the Fathers said "*Don't*," I did as they bid me, and should yet, perhaps, if I had not been made of the material of which revolutionists come.

At one time I would not put in an upper plate without a suction, and never a lower one with a clasp.

For eight years gold and tin were used for filling, but never amalgam.

The uses of contour, at first, I did not see. Its beauties were more apparent when kept out of sight. Also artificial dentures with flat grinding surfaces. All through my early practice I was afraid of offending the Fathers, and it caused me much sorrow and heartache and kept me in poverty and made me work harder than a galley slave.

Live as long as you may, there are to be found many young as well as old persons who say "Stop" to every new advance. Do not mind them; strike out boldly for yourselves and humanity.

In one thing I never have changed from the beginning of my career, and that is I have never sacrificed a tooth without a struggle for its existence. A human tooth has always been treasured as a physician would the living body, and with the experience gained and ingenuity in overcoming difficulties I seldom to-day extract a tooth.

In the effort to make all plates with suction I had an experience in the loss of my upper left lateral from bad dentistry during my first year of practice. This gave me an opportunity to know personally why it could not be used in mastication. I tried in vain. On one occasion, instead of removing it, as had been my custom, at night, I kept it in, and had finished breakfast the next day before I discovered the fact. There had been accomplished with the plate that which I had never been able to do,—eating while it was in my mouth. This was suggestive, and I applied it to others, and avoided clasping the teeth. In using only suction-plates I allowed many mouths, especially in the lower jaw, to go

*Read before the Odontographic Society, of Philadelphia.

toothless, and yet, finally, a somersault was turned, and clasps are now used as a *sine qua non*. Adversity came still further to my aid, and it compelled me to use clasps and avoid bridging. The loss of a first lower molar from too much cutting of bone material to gratify a great contourist, when a flat surface filling was indicated, and the "too much use of the electro-magnetic mallet," to gratify my vanity, destroyed it. He hammered the life out of it, and finally, as no one could relieve me, it was extracted. There was some immediate recompense, for it gave me an opportunity to try my own discovery,—*"rapid breathing,"*—and this proved an entire success. This loss was a most fortunate one for my patients, as it led me to adopt for them a plan which but for this I should never have thought.

Up to this time I had persisted in refusing to use a clasp on any tooth, and hundreds of cases in the lower jaw, and many in the upper, were allowed to go toothless because I could not put in artificial teeth except by mutilation and permanent bridging, which I have never made in a single case.

All practitioners who were consulted in this case said nothing but bridging would answer. Necessity compelled a violation of a supposed law, and the result has been that in ten years I have been doing this class of work, no vacancy in the mouth having gone unchallenged. During all this time I had seen many cases of clasping good teeth, and the reason of decay and wear where the band was placed was apparent.

First. Any one who has any idea of pure mechanics in dentistry must admit that artificial dentures are placed without any method, reflection, or planning,—certainly not as a mechanical or civil engineer would do in advance on paper,—and with no system to reach the greatest strength of plate and artistic appearance. It is astonishing how persons ever get used to sets of teeth where no articulation has been given. True articulation is a sealed book to the majority.

Secondly. Often bands are allowed to go too far up and under the gum border, and not wide enough. They have either too much spring or not enough.

Thirdly. The clasp is allowed to move constantly up and down on the tooth till the tooth is worn materially.

Fourthly. The clasp is soldered to the plate always in one spot—on the anterior or distal surfaces of the tooth, just where most spring of clasp is needed.

Fifthly. The clasp has always been soldered on to the plate by

fitting both to the plaster cast and soldering them immediately from that.

Sixthly. This plan of soldering never allows the plate to fit as it should, since the clasp draws the plate away from the tooth, and the tooth is forced out of its place and is never easy.

Seventhly. The value of the clasp is lost in not comprehending the exact relation it should bear to the plate.

Eighthly. While the clasp and plate may fit well, it is always a failure if the proper articulation is not in keeping with the opposing teeth. It causes all the strain to come on the clasped teeth, when the plate should rest easily on the gum, and the clasp be firm yet not binding on the tooth.

Ninthly. *The clasp made to fit too closely to every part of the surface of the tooth enveloped results in decay, from the fine capillary surfaces made by the too near contact of clasp and tooth.*

Tenthly. From the imperfect soldering of plate and clasps the bands have to be made to closely hug the surface; and, from the narrow necks of most teeth capable of being clasped, the plate is pushed too hard up against the gums, and to make the plate remain in the mouth the clasps are required to be stiffer and are never quite comfortable. There is not only wear, but caries is produced from the driving of the gum away from the cervix.

To add to this experience of clasping, there have been many failures from permanent and removable bridges. To grind off the entire enamel from any sound or partially sound tooth to place over it a gold cap is unjustifiable vandalism. When I was told that the second lower bicuspid and second molar must be shaped to place over them caps of gold to insert a first molar tooth, I rebelled at once.

Out of all the bridging that have come to my notice, not one has been perfectly articulated. The surfaces of the bicuspids and molars have been ground flat, and, where cusps were placed on, when the jaw made a lateral movement, there was not a buccal cusp touched. The up-and-down movement alone was of any value. The cusps of gold were unsightly, and not the least art was manifest in the arrangement or in the selection of the teeth. The cement placed between the caps of gold and the tooth never fills up the space, being pushed out or away. Especially is this true where a part of the face of the natural tooth is shown from the cutting away of the gold cap.

The cement is put in so thin that it is sure to wash, or be dissolved by the powerful capillary force exerted by the oral fluids.

To add to this misery, the cervical border is seldom free from constant irritation. It is only necessary to allude to the stench arising from the accumulations on the surface of the gold, like barnacles on a ship's bottom.

A bridge can not be kept any cleaner than a plate that is removable, and I never saw a plate that did not have to be polished out of the mouth with the same care as polishing silver ware.

The dentist who will learn to place in partial and full upper or lower sets as they should and can be, and give no trouble to the wearer, will never resort to bridging except when very favorable, and not then by ever mutilating a good tooth crown for a gold cap.

When a few teeth in the mouth are left without crowns, place on artificial crowns that can be clasped to hold the plate in position without any fear of falling out. It is astonishing how firmly one tooth, with a properly fitting clasp, will hold a full set, upper or lower. I have repeatedly utilized an old root with a porcelain crown, and, in time, should it be lost, the patient has become so accustomed to the plate that it is not missed.

Above all else, I assert, knowingly, that could the art of articulation have been carried out as I have demonstrated so often, bridging would never have come into such general use.

(Concluded in our next.)

THE BRIDGE-WORK FAD.

Dr. S. F. Gilmore, Princeton, Ind.

This is an age of "fads," even in dentistry.

Perhaps the patrons of bridge-workmen are the true sufferers, judging from cases that have come under my observations, both in this country and in Europe in the past few years. In looking for a young man to take charge of my office I found that it was a current belief among those with whom I corresponded or came in contact, that the high standard of their ability should be inferred from the fact that they could make bridge-work. I would consider it much more satisfactory evidence of a man's attainments if he were to assure me that he could "stop toothache." For this is therapeutical, and the "bedrock" of the profession. I do not wish to convey the idea that I am opposed to inserting bridges, for I have made a great many that are doing good service, but let it be understood that this class of work is merely adjunctive, and one of the simplest operations in dentistry.

Let a man seek with heart and mind the knowledge necessary to enable him to diagnose. Following the accomplishment of this art, with the ability to apply or prescribe the remedies indicated.

I would classify attainments in the following order:

1st. Therapeutics.

2nd. The selection and insertion of the proper materials for arresting decay in carious teeth.

3rd. The selection and artistic arrangement of a set of artificial teeth.

4th. If he is able to judge of favorable conditions for a bridge—make it.

While in the office of a neighboring dentist a few days ago a lady called to consult him, or rather to have him relieve her of a \$200 bridge that had been mounted a few weeks before, on six or seven diseased teeth and roots, by another dentist, who styles himself a bridge-workman. The mechanical part of the work was good, but a maker of artificial limbs might, with as much propriety, cement a wooden leg on a gangreneous stump.

TOBACCO.

Dr. A. F. Davenport, North Adams, Mass.

As soon as tobacco came into habitual use, and its pathological effects became apparent, both England and America, actuated by a desire to protect their subjects from its deleterious effects, united in an effort to banish the drug. In other countries also where tobacco had found its way, severe penalties were imposed on all who used it. Pope Urban VIII issued a bull against the practice of using tobacco, and thundered with all the artillery of the Vatican against those who thus defiled themselves; he carried his denunciations so far as to excommunicate all who used it in church.

Indulgence in narcotics, to dull, stupify, or soothe the nerves is a predominant weakness, and in this country, and some parts of Europe, tobacco is adopted as the favorite narcotic, while among the Chinese opium is by far the most generally used.

Opium and tobacco possess many properties in common, though the latter is the milder; still, when used in excess, its deleterious effects are no less certain. Measures of a severe nature have been tried in China to check the use of opium, but all of no avail; whatever else the Chinese may be willing to forego, they

will have their favorite narcotic. The results of opium eating are very sad, the unfortunate victim seldom living beyond the age of forty.

Among Americans there are probably no vices that do so much harm as tobacco and intoxicants, and there are few more pitiable objects among us than the inveterate smoker and drinker. They each produce a slavery without hope to a soulless master, a servitude without compensation. They are twin brothers of evil.

The life and health and substantial happiness of an individual are the result of the normal functional activity of every organ in the body. Tobacco causes paralysis of the functions. It soothes the excited nervous system only to render it more irritable and feeble. In this respect it is like opium. Tobacco may soothe and cheer the weary toiler, and solace the tired and overworked brain and muscles, but the sequel is pernicious. The immediate effect is followed by a real destruction of vital force. It contains nothing of use to the tissues of the body. It has absolutely no food value, but is a deadly enemy to the senses, lowering the entire physical and moral tone. Tobacco, like intoxicants and other narcotics, may seem to spur the weary brain or feeble arm to undue exertion for a short time, but its work is destructive, not constructive.

When brain or physical force has been expended, nature must have time to recuperate, and all devices for escaping from this necessity fails. It is bad policy to set the house on fire to warm our hands.

The use of tobacco is especially injurious to persons of a nervous temperament, and its use is wholly incompatible with those of sedentary habits. It produces trembling, enervation and depression, extreme irritability, cerebral softening and paralysis, and we may add dyspepsia, neuralgia, narcotism of the heart, and many other maladies.

These form only a part of the chamber of horrors with which the "tobacco temple" is built. They are not furnished by its enemies but by its worshippers.

The effects of tobacco on the heart, is often rapid and marked; increasing the rapidity of the beats,—expanding the vessels with apparent accession, but of real waste of force. Numerous experiments have been made to test the narcotic effects of tobacco on the action of the heart. In many instances during the act of smoking its pulsations have been quickened nearly fifty per cent.

From the intermittent pulse caused by smoking, to angina-pectoris the distance is not far. That tobacco may produce all the usual symptoms of that painful disease has been abundantly shown.

The action of tobacco on the vision is also well known. Excessive smoking, if long continued, destroys the susceptibility of the eye, its motor power becomes paralyzed, resulting in blindness.

Prof. McKenzie says patients afflicted with amaurosis are mostly lovers of tobacco. Others have found cases of complete amblyopia incurable, but by cessation from the use of this noxious weed. The continued excitement of the optic nerve by tobacco produces amaurosis. This is generally cited in the text-books as one of the causes of that disease. In France the attention of the authorities has been called to the fact that scholars who use tobacco are decidedly inferior in average attainments to the others. This investigation has led to its prohibition in the schools, and to the formation of anti-tobacco organizations among the young in that country.

The use of tobacco, so common in *our* country among the young, is doing much to undermine and lower the physical vitality of our race.

One of the most discouraging features of the situation is the example set before the young by their own parents, and by men of all classes and professions, including in some instances the medical, dental and clerical. What a shame that our youth should have such examples to lead them astray! Probably in nine cases out of ten, the mischief is done and the habit formed among children, who try to play the man by imitating one of his faults.

According to the International Revenue Report three hundred million more cigarets were smoked in 1888 than during the year previous; and the pernicious habit has enormously increased since. Take into consideration the fact that they were nearly all smoked by boys and young men, and the future of our race looks sadly ominous. A tobacco dealer in New York advertises the fact that last year his firm manufactured 825,000,000 cigarets,—not a very encouraging statement when we consider the demand is fully equal to the supply.

There is probably no habit to which Americans are addicted that is so enslaving as the tobacco habit; and it is certainly one of the hardest from which to break, when once the habit is formed. Its moderate use is found to be next to impossible.

The direct effect of the drug is to create the same craving its votaries are seeking to gratify; one narcotic creates a demand for another, and tends strongly to the use of intoxicants. This craving is like a cancer out of sight, preying on the vitals, and beyond the reach of the surgeon's knife. One recent writer has tersely put it,

"The way to the drunkard's grave is strewn with tobacco leaves"; —not all who use tobacco drink, but they are on the road to the saloon, if they are not there.

It is a disgusting filthiness.

Of all classes who should abstain from tobacco in all its forms, is the professional man, and especially the dentist, whose mission and life work is to teach others how to care for the mouth and teeth. And how disgusting his very breath to his patients. No wonder he is silently avoided by those who would otherwise be his most respectable and profitable customers.

To make glue water-proof, dissolve of gum sandarac and mastic each five and one-half drams in one-half pint of alcohol, and add five and one-half drams of turpentine. Place the solution in a glue boiler over the fire and gradually stir into it an equal quantity of a strong hot solution of glue and isinglass; strain while hot through a cloth. Or to plain glue solution add bichromate of potash; on exposure to the air it becomes water-proof.

Office and Laboratory.

REMOVAL BRIDGE OR PLATE WORK.

Dr. Chas. L. Van Fossen, Kansas City, Kan.

The first consideration brought to our minds when a bridge is spoken of is the anchors. I want my position understood when I say that good solid teeth or roots for anchorage of removable bridges should invariably be used. By this premise I would indicate that I consider it even more necessary than in stationary work; because the insertion and withdrawal of the piece will of necessity cause strain on the anchors.

I speak of the anchors as of prime importance, for I see and hear of so many pieces, carefully designed and constructed, yet in a year's time we see the grand monument of esthetic bridge-work fallen.

Every failure of bridge-work carries some one over to that army of opponents to all classes of bridge-work. There has been so much work attempted in replacement of teeth by anchorage to natural teeth or roots, so positively against all sense of reason, all laws of science or mechanics, that it is not to be wondered that we

are constantly meeting people who are most pronounced in their opposition to all classes of bridge-work, and who seem to think you are doing them a wrong to even intimate to them that such work can, or is, being done. They may have good cause for feeling as they do; possibly they, or some of their friends, have been the victims of misapplied knowledge; still the fact of your seeing or hearing more cases as failures, gives us no criterion to stamp the whole line of work a failure.

There seems to be no other field so open to practical genius as is found in dental prosthesis. There are myriads of ideas, ensembled and grouped together, of part development, and yet it does seem as if we were but on the dawning of the day, as the sun barely peeps over the horizon, as to what might be done in the future.

The first thing we consider, after the tooth or root anchors are decided on, is the root protection. This is made by trimming the sides of each anchor to a perpendicular position by means of corundum, emery, and sand-paper discs, and banding each anchor accurately. To simplify I will describe the anterior and posterior anchors separately.

In the anterior teeth we utilize only the root, trimming down in the ordinary manner for setting a Richmond crown, with one exception, and this is the advisability of slanting the root from the labial to the lingual surface, to allow of as high a ledge in the rear as circumstances will permit, trimming the band on the labial surface to almost the gum margin. Next we solder a flat cap over the band and trim down the edges accurately. We next enlarge our pulp canal as large as possible to still retain sufficient strength, and turn our attention to the pin, which is made of either gold clasp metal or platinum and gold. Taking a heavy wire, bend about double, and inverting the loop end down, add twenty or twenty-two k. gold to the loop by melting till we have quite a ball or knob as large as the top of our root will admit, trimming this pin up to loosely fit the root. We next make a tube of No. 30 platinum to fit the pin accurately, soldering the tube with pure gold. Puncturing the cap of one root protection, we drive the pin and pin covering through as far into the root as possible. We will have a little surplus of the platinum sheath or tube, which we split in several places and burnish down to the cap. Next carefully removing the pin to not displace the tube, we remove the root protection with the tube, and invest upside down, being careful to fill the tube with the investment, and thereby keep the solder out, heating up the investment solder altogether. We now proceed to

make a Richmond crown for the platinum covering of the root, being careful not to let the band impinge on the gum, as its removal and subsequent replacement a number of times daily would start up a serious gum irritation. We do not consider the pin at all in making the crown, but make it pinless, and when the whole piece is complete trim the top of the pin to a round centre, and thread in your screw plate, and place in the root tube, drop a piece of wax in the centre of the crown, press to place. This will mark the position of the pin and allow you to take a drill the size of the screw, and drill a hole in the crown, and then thread the hole the same as the pin. We can now screw our pin in and rivet at the top, and any subsequent repairs made with very little inconvenience.

In the posterior attachment we allow the inner band of platinum to extend nearly as high as the natural tooth was, leaving only sufficient space between the band and articulating teeth to allow of a quite heavy solid gold cap, capping the band in the usual manner, *flat*. Make the pin as heavy as possible and cover with the tube as described for the anterior crowns.

With the exception that we make the ball at the top much heavier and the pins separated much more, and make a partition wall in our tube to fit between the two prongs of the pin, proceed to connect the tube and root covering as described, and, after polishing, set with cement to place.

I neglected to state that this tooth covering should always be made some smaller at the top than at the gum margin.

We next make a telescope crown of twenty or twenty-two k. gold to fit this inner platinum sheaf, trimming off flat at the top, and next mold a solid gold cap to make a thorough articulation with the corresponding teeth.

A very nice method of obtaining a perfect articulation being to pound a bullet into your die-plate on the tooth you desire, file flat and lay on top the cap, and allow the patient to close the jaws firmly. The opposite teeth will press into the lead easily, and allow you to trim down with a knife.

When perfect, drop a little sticky wax on a round stick and place the lead on it, and proceed to mold your cap in the cuttle-fish bone as usual. By this method you have no grinding of the cap after finished.

Soldering the cap now to the telescope band, we have our anchor complete, with the exception of the pin in the cap, which we screw and rivet to place.

We are now ready to consider the attachment of the intervening or bridge teeth. Here we are allowed a variety of methods. The only stipulation I would make is that the gum should be saddled to allow it to assist in standing the strain.

We can swage a rim of gold to fit the gum quickly by taking a plaster impression and drying out; flow in fusible metal and proceed to burnish the rim to place, which can readily be done by annealing a few times. Soldering the saddle to the two anchors, and a few cleates on the saddle, proceed to vulcanize the teeth to the saddle in the ordinary manner of attaching to a gold plate.

Again, in the lower jaw, we may make a very inexpensive case by attaching the dummies together with Watts metal, and soft solder this to the two anchors.

Again, by simply soldering a strong bar of gold or platinum between the two anchors, vulcanize the teeth between.

If you want more elaborate and extensive work, swage your rim, back your teeth and solder to the saddle, rim the labial surface, and you have a whole gold case.

The advantages I claim for this class of work over stationary bridge-work are:

1st. Absolute cleanliness, as the patient can remove and cleanse at will.

2nd. A more natural appearance of the work, as by the use of rubber or celluloid for attachment we can use teeth without the heavy gold coverings, as a breakage does not necessitate much work in repairing.

3rd. More extensive work, as the teeth used as anchors do not have to stand the blunt of the forces of mastication.

4th. Extension bridges, as the gum will stand the strain.

5th. Allowing us to more easily reproduce nature on utilizing gum-blocks where, by the ravages of disease or marked shrinkage of the alveola, such are indicated.

6th. A more natural feeling in the mouth, as no spaces need be left to insure cleanliness.

WANTED, MORE AIR.

Not long ago I was asked by a lady to examine her son's teeth and inform her what they needed. I found some filled with gold and several with the fillings broken down and out. One upper central and lateral were devitalized and had been drilled into from

the palatine surfaces to gain access to the canals. These seemed to have been standing in this condition quite awhile, as considerable decay had taken place from the interior of the pulp chamber, and the canals were in a fearfully septic state.

I reported what I had found, and took the liberty to inform her that if these cavities were not filled he would soon have no teeth.

She then told me that Dr. ——— did the work, and he was going to fill them as soon as they were ready. I asked her if they were being treated. She said no, but Dr. ——— said they needed a little air, and would be ready as soon as they had aired thoroughly. He had filled them about six months before and they got very sore, and he took out the fillings for them to air. Her son had been back several times, but Dr. ——— always found on examination that they had not aired enough, and would advise him to wait a while longer.

This was one reason she desired the examination made; she wanted to know about how long a tooth ought to air before it was ready to be filled. I could not make a ready response to this, but, after catching my breath, I informed her that there were some cases which, from a peculiar idiosyncrasy of the patient, might complicate matters more by airing too much, and I should advise their being filled at once. And this doctor is a graduate of a dental college, practices his profession in a city, and probably holds a State license.

TEETH IN ANCIENT LORE.

By Nafthali Herz Imber.

Last year I gave in the *ITEMS OF INTEREST* an outline of "Dentistry among the Ancient Hebrews," to show how the dental profession was developed in the *tents of Shem*. My present sketch will give the moderns an idea of ancient *tooth lore* of the Orientals, and at the same time solve the riddle which has been baffling many, why the teeth of the Orientals are in a better condition than those of our own civilization. One reason is because the Orientals believe most ailments are attributable to the teeth. Hence they pay more attention to those precious stones, which they call the teeth. Long before our modern dentists began to warn the people to "beware of the teeth," the orientals taught the importance of the teeth to children in the A B C of their folklore. Moderns are more apt to look to the stomach for the origin of diseases. This idea is often misleading, for if these millstones

cannot grind any more, of course you cannot expect the fleshy stomach to do its work. During my wanderings in the Orient I was struck with the fact that these uncultured people are seldom troubled with the *toothache*. In the aged you notice the splendid array of white teeth, all in line like soldiers. Before and after each meal the Oriental washes his teeth. This remarkable attention to their millstones makes them durable.

IN ANCIENT POETRY AND IN THE PROVERBS.

Solomon compares the trust in a traitor to relying on a broken tooth, and to a leg out of joint. A lazy messenger, he says, is like vinegar to the teeth. He describes man's going down on the ladder of life on the dreadful steps of age in a lamentable condition, by saying the millstones—the teeth—are falling out. The crowned sage sees the misery of his life begin as the millstones' activity ceases. He says of the teeth of his beloved: "Thy teeth are like a flock of ewes newly shorn, which are come up from the washing, all of them in pairs."

Indeed, every poet in the Orient marks the beauty of his beloved lady in the emblem of white teeth. They are an important link in love, of which her ladyship in the Orient is very proud. Zuleikah is always busy in the harem cleaning her teeth. With them teeth are a symbol of poetical language as well as beauty, and the figure of strength and power and terror. Job, when the Almighty demonstrated to him the strength of Leviathan, one of his creatures, asked:

Who can open the doors of his mouth?

Terror is round his teeth.

The great lamentator Jeremiah, when bemoaning the fall of his nation and country, cried out: "And he (the enemy) broke with stones my teeth." The seer Joel, when fortelling the invasion of the grasshoppers, pictures them as having "teeth of a lion." Moses, speaking of Israel's punishment, says: "I will send on them the tooth of the beast." King David sketches the attitude of his enemies as "those flatterers and mockers, who frown on me with their teeth (that is, in their anger, they show their teeth)." The tooth of a beast is reckoned in the Talmud as one of the four principal points when the owner is held responsible for injury done, and the dangerous beast is to be stoned.

At the time of the prophets they had a proverb signifying the sufferings of the children through the wrong doings of their parents, and the symbol is toothache. "The sires ate unripe fruits,

and the teeth of the children are spoiled." To show the false arguments, the Talmud used this saying: "break his teeth."

"All pain, but not the pain of toothache," is a gnomic saying of the Talmud. Toothache is therefore considered a direct punishment from the Almighty for some evil deed. Rabbi Jehuda the prince, the Talmud tells us, was punished with toothache by God for a revolting deed. Rabbi Jehuda, who lived in the first century as a prince, and known as the first editor of the Talmud, was celebrated as a pious man, and therefore was styled "the Saint." That Rabbi, so narrates the Talmud, went once through a street, where a young calf was to be killed. The calf came to him, praying to save its life. The Rabbi kicked it, saying: "Go, for this purpose you were created." For this cruel feeling toward the dumb creation, God afflicted that Saint with a toothache for many years. From this legend we can see that the Orientals considered the toothache the most terrible affliction.

The Talmud says:

Dreaming his teeth are falling out, is a sign that the children will die.

When one loses his teeth, he loses his bread.

Teeth are the strong tower to guard the fleshy tongue, and their loss admonishes him not to speak evil of his fellows.

If the hog should have horns and the serpent teeth, the world could not exist.

A toothless dog can only bark.

Put not your finger between your teeth.

Wash your mouth often, is a Talmudial golden dental rule.

If one tells you to take away the little wood from your teeth (signifying a little evil), then tell him to put away the roof from his eyes.

When the seer speaks of a mighty enemy, he says he has the teeth of a lion.

Clean teeth mean starvation in the language of the prophets.

IS IT PROFESSIONAL TO ADVERTISE ?

SOME SUPERANNUATED QUESTIONS ANSWERED.

Neither do men light a candle and put it under a bushel, but on a candlestick, and it gives light to all that are in the house.—*Matt.* 5 : 15.

This is not only scriptural and moral doctrine, but the experience of men in ages has found it to be sound, practical common-sense

Advertising is admitted by all intelligent people as a necessity for the advancement of knowledge, civilization, religion, and business. The merchant does not sit in his store supinely waiting for customers; he takes the means of informing them of what he has for sale. Railroads do not wait till the traveler finds out from others that the road is in existence; they advertise their road and its facilities, and the public patronize them. Churches and church societies use every means of informing the people of their aims and objects, and the printing press has been a most wonderful power for good in their hands. Hence, the farmer knows where to purchase seeds and agricultural implements to the best advantage; the family knows where dry goods, and the best groceries are kept. The parent knows what institution of learning is best adapted for the bent of his children's capacity; the traveler knows what road to take for his desired destination: all this is conceded to be perfectly proper. But from all directions is heard the cry of some members of the dental profession, who say you must not know through advertising where to go to find relief or benefit.

Thus every dentist who has strength enough in his convictions, and stands forth and tells in common sense and plain English of the methods used in "Modern Dentistry," under which we include filling teeth without pain, extracting teeth with local anesthetics, and inserting by crown and bridge method, will at once be denounced as a charlatan and a fraud. But is he? "Crown and bridge-work is a triumph of the 19th century," so says our esteemed editor Dr. Welch. It is surprising how few people outside of the dental profession know of such a method of restoring the teeth to their natural functions, thereby alleviating a vast amount of pains and the avoidance of wearing a cumbersome, treacherous plate.

Is the merchant a "humbug" and a quack because he advertises? Are railroads, church societies, institutions of learning, schools and colleges, manufactories, managed by "charlatans" and superintended by "mountebanks," because they advertise their respective business to the people? Oh no! perish the thought; and yet, professional brethren, answer my question: Can you give one good, sound, plain, practical, common-sense reason why the reputable dentist, fitted by years of experience and education, should not make known his business to the public by the only way in which he can make the benefits of his knowledge reach the greatest number, and thereby do the greatest good, to himself and a vast number of intelligent people?

A "Professional."

WAS IT A MISTAKE ?

EDITOR ITEMS:—I notice among the names of Honorary Presidents of the World's Dental Congress in Chicago that of *F. J. Washinskij*,* of St. Petersburg, Russia. Dr. Vajinskij is the head of the dental school of that city, and has been given unpleasant notoriety by the suicide of a young lady student, Miss Taberio, reported to the ITEMS OF INTEREST (under the head "Is Co-education a Failure?") It is the same gentleman whose name was taken off the list of appointees to the International Dental Congress of Paris, in 1889, the Organization Committee explaining, through Dr. Purchet, Chief Secretary, that his appointment had been made by mistake, and naming Prof. V. A. Pravednij in his place.

Now, as far as I learn from both German and Russian sources, great surprise is expressed at the appointment of Dr. Vajinskij. It is argued that he has hardly contributed anything to either science or art, but has degraded himself by setting up his advertisements of elixirs and powders at the Third Medico-Hygienic Convention of Physicians in St. Petersburg. For this act the local society of dentists and physicians practicing dentistry, at its meeting, January 29th, 1889, unanimously decided "to express its deep regret," and declared that, "in the interests of the students, a more *exemplary propriety* is to be expected from the head of a dental school than an advertisement on the labels of tooth powders."

Besides, there having appeared no denial to the story of the brother of the above unfortunate female student, published in *Novoye Vremya*, that Dr. Vajinskij is addicted to being *not in his shape*—drunk—both in and out of his school; and having by his other acts shown himself to be unworthy of respect of the better element of the profession, the question arises, on what ground has the selection of such a man been made for so honorable a position?

Is it simply because he happens to conduct a dental school? But if that school is believed to be a shame rather than pride to the dental fraternity of the world, shall the man still be honored for a mere accident of his position, which, too, he disgraces?

No, I believe rather that a mistake similar to that of has occurred, and I select the ITEMS OF INTEREST, which has always stood for purity, culture and higher intelligence of the dental

* The right name of that somewhat *notorious* Russian dentist is Foma (Thos.) Ivanovitch Vajinskij.

profession, to sound the note of warning to the committee, and thus early give them an opportunity to rectify their error.

Surely, if they follow in the footsteps of the French committee and substitute for the objectionable name that of the venerable Prof. V. A. Pravednij, they will be much nearer honorable and scholarly competency.

However, as it is not a question now of any other person, I simply desire to insist that, in view of the above facts, our Committee *must* reconsider its nomination for the representative of the Russian section of the coming great International Dental Congress.

G. Randorf.

To make plaster set hard, the *American Druggist* says: "Mix best plaster of Paris with about one-tenth (according to effect ascertained by preliminary experiment) of very finely powdered marble dust (calcium carbonate), or add to it about six per cent of powdered alum, or about the same amount of ammonium chlorid, before mixing with water."

GOLD CROWNS.

I have read with interest the several plans suggested in your columns for the making and articulation of gold crowns, but I find no one more simple, or more perfect, than one I have been making for the past two years. After having made the band and contoured it with pliers, or otherwise, select from a collection of molar dies the die nearest the size of the band, and swage the grinding surface of 22-karat gold, very thin, 34, 35, or 36 gage, on a block of lead or soft wood. Now stick this to the band with the smallest particle of solder. Trim the cap, particularly proximal sides, so that it will pass readily between the teeth. The band is now placed into position. If force, sufficient to bend the grinding surface, is required to get the band into position, place under the cap an ordinary foot plugger, and push the band into its place. The patient is directed to close the jaws, and owing to the thinness of the gold grinding surface the impression of the opposing tooth is easily made, thereby securing the correct bite. The crown is now removed. The cap and band are held together by the ordinary soldering pliers, and the cusps are filled with 20- or 18-karat solder, which, of course, unites the band and cap. The crown is now finished in the ordinary way. This is as good a crown as can be made, and recommends itself because it is so quickly made.

Dr. Gordon White, Nashville, Tenn.

"DEATH FROM MISADVENTURE."

The newspaper accounts of an inquest recently held, do not give a very clear idea of the sad circumstances under which a London dentist lost his life. From a personal inquiry into the matter, there seems little reason to doubt that the cause of death was ordinary asphyxia, rather than respiratory paralysis from nitrous oxid. There were three 100-gallon cylinders in the room. Two were in a vertical stand in a corner. One of these was full, and turned off. The other was turned on, with the key in position, and was empty. The third was a new arrival, lying on the floor close by, wrapped in brown paper. From a comparison of cases recorded in business books, it is possible that the cylinder in use might have been half full, but a suggestion is possible that it was nearly empty, and that the new cylinder was to take its place in the stand. The deceased was found, by a servant, in a bent position in the corner of the room. The face-piece was near the mouth, whether held by the hand, or supported on the knees, is not certain. The left hand seems to have rested on the gas stand, and in this way a bruise on the anterior surface of the wrist may be accounted for. The body was warm, there was marked cyanosis, but no pulse, and artificial respiration was of no avail. A post-mortem examination showed slight hypertrophy of the left ventricle, an engorged right heart, and the venous system everywhere much congested. The lungs were also extremely congested, but there was no foreign body in the air passages. It is difficult to imagine that anyone could sit upright in a chair and inhale gas from a face-piece held in the hand till the respiratory center was paralyzed. The inference is that the deceased intended changing the bottles in the stand, and took the idea of inhaling the small quantity which he supposed was left in the old bottle. It was enough to cause loss of consciousness; and slipping from the chair resulted in a position which prevented respiration. We found, as details, that the two-way stop-cock was hard to turn, and that there was a leak in the two-gallon bag used. We think the jury fully justified in returning a verdict of "Death from misadventure."

A dental school for women is going to be opened in Stockholm, Sweden.

MANUAL TRAINING.

Hand-culture, apart from its value *per se*, is a means toward a more effective brain-culture. The dentist who has spent a short time in the practice of his profession, and gained even no more than average manual dexterity, who cannot accept the truthfulness of this statement, must admit that his experience has taught him nothing. It has become a trite saying that "experience is the best teacher," and in dental teaching, within certain limits, this is put into practice. Thus all the reasoning or didactic teaching in the world will not enable a student to successfully fill a tooth or make an artificial denture till he has seen it done; or it may be said, even at the risk of making an Irish "bull," that he cannot properly do either till he has first done them imperfectly; and though it may be urged that the practical part of dentistry is already taught in the clinic room and laboratory, yet, if viewed in the light of their possibilities as educational means, from the standpoint of *the manual training principle*, at the same time bearing in mind, as before stated, that any method of imparting knowledge which involves the exercise of any of the perceptive faculties, is properly included in the manual training idea, it is questionable if these departments have received the attention and elaboration which their real value as educational factors demand. It has been shown that development of the intellect is a natural physiological process presenting two distinct phases—*viz*, the acquisition of basis facts through the perceptive faculties, and the orderly arrangement of and reasoning on the acquired knowledge. The function of the laboratory therefore naturally precedes that of the lecture room; and for the reason that by far the greatest proportion of the labor of the dental educator is devoted to imparting to the student the knowledge of the facts of dentistry, it seems clear that the laboratory and clinic room should be the arenas for his most conscientious and devoted efforts as instructor.

Freely admitting that the judicious selection of the "dental timber" would of itself greatly improve the quality of the finished product, yet, in view of the lack of preliminary examinations of an *efficiently selective character* in our dental schools, the immediate question at issue is, How shall the best result be gotten from the material as presented? Does not the manual training idea offer the most promise as a means for developing a student of average abilities, just as it may be expected to produce the highest result when applied to the best?

ITEMS.

The ITEMS is undoubtedly the journal for practitioners who have little time for reading. It is always plain and comes straight to the point. Never take my name off the subscription list.

J. P. Williams, Chattanooga, Tenn.

* * *

The dentist should hold out no false hopes to a patient, by promising success where, in the very nature of the case, there is any uncertainty, but every case committed to his care should receive the attention which is due to any operation performed on living sensitive tissue.

D. V. Beacock.

* * *

Here is a law as is a law: Secretary Wilson, of the New York Chamber of Commerce, presents statistics showing that the present market value of the silver purchased by the Government since the passage of the Silver Act of 1878, is \$351,457,257. It cost the Government \$432,372,907. The loss in value of the metal amounts to \$80,915,650.

The Manufacturer.

* * *

FORMULA FOR INSECT BITES.—One of the very best applications for the bites of mosquitoes and fleas, also for other eruptions attended with intense itchings, is: Menthol in alcohol, one part to ten. This is very cooling and immediately effectual. It is also an excellent lotion for application to the forehead and temples in headache, often at once subduing it.

Weekly Medical Review.

* * *

For mending broken cast iron, the following is recommended: Take 2 ounces of sal ammoniac, 1 ounce of sublimed sulfur, and 1 pound of cast iron filings; mix in a mortar and keep the powder perfectly dry. When it is to be used, mix it with twenty times its weight of clean iron filings, grind the whole in a mortar, wet with water till it becomes a paste, and apply to the parts to be mended. It will become after a time as strong and hard as any part of the metal.

Office and Laboratory.

* * *

Mr. Shelford Bidwell's heat engine depends for its action on the fact that nickel is magnetic at ordinary temperatures, but at 300° C. becomes suddenly non-magnetic. A slip of nickel is attached to a disk of copper suspended by two strings, so that it can swing like a pendulum. On one side of the hanging metals is

a magnet, with which the piece of nickel is ordinarily kept in contact, and held by it. By placing a gas flame or a spirit lamp underneath the nickel, so as to warm it, it becomes so heated as to lose its magnetism, or power of being magnetized, and falls off—the pendulum thus making a swing. By its passage through the air, the nickel is cooled below the critical point, and on returning is held again by the magnet, only to fall off again as before, and so on, with considerable regularity, so long as the source of heat is kept up.

Office and Laboratory.

* * *

DANGERS OF ARTIFICIAL TEETH.—Some extraordinary evidence was given at an inquest held recently by the Westminster coroner, respecting the death of a policeman of the E Division, who early on Sunday morning ran to the assistance of another constable engaged in conveying a prisoner to the station, but almost immediately fell and died. A post-mortem examination revealed the fact that the unfortunate man had been suffocated by a set of artificial teeth, which had been dislodged while he ran, and became fixed just above the larynx.

The British and Colonial Druggist.

* * *

A young dentist recently returned from a prospecting tour at Rio de Janeiro, says: "In that city of 300,000 inhabitants it is not unusual for a dentist to receive fabulous fees; that the time to visit Rio de Janeiro is during our summer, which is their winter; that the desirable patients for the dentist are the families of the farmers, who are, as a rule, the substantial moneyed people; that the inhabitants appreciate good dentistry and have good dentists; that they have a good dental college and that foreigners must pass a rigid examination in two languages before a State Board to practice; that it is not unusual to see the sign 'American Dentist.'"

Office and Laboratory.

* * *

NO EXCELLENCE WITHOUT EFFORT.—He who aspires to do anything well should look on nothing with greater suspicion than on that which he seems to have done easily. It is true easy doing comes of hard practice, but that same hard practice is really the preliminary of the doing. Yet even then the attainment of a measure of ease ought to be the signal to move on toward that which is less easy. A recent writer, speaking of Tennyson's devotion to ideal excellence, remarks that "he was not easily satisfied with his own performance, but ever returned to it with a critic's eye and a courageous hand. . . . Every cadence, every word, was challenged and assayed." He was the greatest poet of his

day, partly because writing poetry was hard work to him. And, conversely, many of the smallest poets of the day are so small because they find the writing of poetry so easy. And so it is with general composition, and with all kinds of work.

Cosmos.

* * *

LABOR.—Life to some is drudgery; to some, pain; to others, pleasure; but to *all*, work. Let none feel a sense of sore disappointment that life to them becomes routine. It is a necessary consequence of our nature that our work and our pleasures should tend to become routine. The same wants, the same demands, and similar duties meet us on the threshold of every-day. We look forward to some great occasion on which to give proof of a heroic spirit, and complain of the petty routine of daily life. It is this succession of little duties, little works apparently of no account, which constitute the grand work of life; and we display true nobility when we cheerfully take these up and go forward, content to "Labor and to wait."

Editorial in Southern Journal.

* * *

THE RUBBER DISEASE.—I have been a subscriber to the ITEMS for a long time, and have found many good things therein. But I was amused at reading Dr. Hodgkin's article, on what he calls "The Rubber Disease." I have been a dentist for many years and have never seen a case. The worst case of "rubber sore mouth" I ever saw was in the mouth of an English lady, who had a small platinum plate put in in England, which had not been removed for four years. You can imagine the condition of her mouth and plate. I am not a betting man, but I will wager one hundred dollars against fifty that no man can bring me a case of "rubber sore mouth" that I cannot cure with a rubber plate.

T. F. Skeede.

* * *

WILLIAM BLAIKIE ON WALKING.—Walking, when properly engaged in, is of great benefit to all those who lead sedentary lives, and should be practiced every day in the year to keep the system in good order and full working condition. If young men and women would stop for a moment, cast their eyes around them, and behold how many people there are who are simply weakening their constitution by degrees from the lack of knowing how, when, and where to walk, it would not be a great while before every man, woman, and child would resolve to make an effort to walk aright, and gain in a great measure that buoyancy, freshness, and vigor which comes to all who endeavor to take up their burden anew and walk in the right way.

Good Health.

The following is from one who sent a question to our Quiz Department. It shows it is appreciated:

Dr. E. N. Francis, Uvalde, Texas.

DEAR DOCTOR.—Thanks for the trouble of forwarding my letter. I want to thank you also for your kindness about the Q. B. in ITEMS. The responses to the query were certainly all we had reason to hope for. I am glad to get adverse criticism when it is in the spirit of fair and honest conviction, for we want to see ourselves as others see us.

One thing is apparent to me in the many communications I am getting as the result of the kindness of the ITEMS, and that is that this journal reaches farther among dentists than any other journal published in their interests.

When you write Dr. Welch, kindly communicate my thanks to him also, though I intend to write him soon. *R. B. Tuller.*

* * *

EDITOR ITEMS:—I was pleased to see the address "To my beloved profession" in the April No. of ITEMS but you may be sure I was astonished at the misnomer applied to the work I am doing. In all my communications with your enterprising journal for the past year, not once have I mentioned bridges. I build dental causeways (not bridges) which are solid structures—on solid bases—solid in substance and especially solid in the comforts and blessings they supply. Moreover *causeways set aside all other known ways of inserting teeth*. Plates, clasps, pressures, springs, caps, crowns, etc., are *in their presence* "way backs" forever more. If you had been more in touch with the wonderful things transpiring in my field of labor you would not have made this mistake.

J. W. Clowes.

* * *

Speaking about the ancient history of California, one of the most gifted writers on the days of "49" is Prof. J. Foster Flagg, of Swarthmore, Pa., who spent some seven years of his early manhood in the cities and mines, the mountains and plains of this not unromantic territory. Bright, racy, glowing, and full of fun and feeling are his descriptions of "those days of old, those days of gold, those days of forty-nine." As he loves *good* amalgam, and *good* gutta-percha, and *good* cement, so does he love California; and as he has cherished a much-loved profession, so does he cherish, with all the fervor of a warm and earnest nature, brightest memories of some of the brightest days of his most active, most earnest, and most useful life.

"A Native Son," in the Dental Tribune.

INTERNATIONAL REVIEW.

By George Randorf.

RESTORATION OF THE FACE AND JAWS.

Professor Ronnet, of the Dental School of Paris, deserves high credit for the ingeniousness displayed in treating a singular case, without precedent in dental practice.

The patient, a woman, thirty-two years old, having multiple tumors of the jaws and malar bones, applied at the Academy of Medicine.

The irregularities on the face became visible about three years before that time. The superior right maxillary being attacked with ossification, it was removed by an experienced surgeon. A relapse occurred a short time after that, and the left superior maxillary was attacked.

L'Odontologie reproduces the following description of the patient when she appeared to Professor Ronnet four years after the first operation:

At this time her face was frightful, the superior left maxillary, larger than the right one, was the size of the head of a new-born child; the inferior was full of tumors; the cheeks, the eyelids, and the nose receding; the buccal, orbital and nasal cavities were obstructed; the alveolar arches were hardened, and the teeth mobile, out of shape, so that hardly two were in apposition; mastication, deglutition, phonation and vision were disturbed.

Exhausted by her sufferings, frightened by the rapid progress of her swellings, the young woman prayed the doctor to perform an operation. But in order to leave nothing to suspicion, it was necessary to discard the three maxillaries, the malars, and a portion of the sphenoid bones. There was not a similar operation in science, besides the patient seemed too weak to bear such traumatism. However, the doctor yielded to her supplications, seeing her nearly succumbing to excruciating pains.

By the usual process the anterior part of the maxillaries were laid bare. Then the superior maxillaries, the malar bones, the pterigoid apophysis, the naso-orbital partition, and the floor of the orbits were removed. By this time it was clear that the superior lobe of the tumor was located at the base of the inferior blade of the sphenoid bone, which was then cut, and, curious enough, a little molar tooth was found buried transversely in the spongy tissue. Was this unique dental anomaly the cause of the extirpated neoplasm?

Six weeks later the inferior maxillary was removed. The

operation was finished by detaching from the symphysis the muscles, which are there inserted, and cutting, on the median line, the periosteum which covers up the inferior border. Again, a permanent canine tooth was discovered, lying transversely. Was this tooth the cause of the second tumor?

The after effect of this operation were favorable. Not only were the wounds reunited as at first intended, but there was no relapse after forty months. It remained only to correct the deformity and remedy the functional trouble arising from the vast dilapidation.



FIG. 1.

An incision was made, and the situation became much improved.

Another cicatrized ridge in the buccal cavity, separating the posterior part of the nose from the roof of the palate, serves as a prop for the attachment of the apparatus (Fig. 2), which, as it will be observed, is not unlike a normal denture in its essen-

When cicatrization was completed, it was possible to explore the buccal cavity. The mutilation as shown in Fig. 1, was considerable: the inferior part of the face presenting a mass of soft, flabby, drawn back tissues, offering not only a too uncertain foundation for a prosthetic apparatus, but making it difficult even for taking an impression. However, later on a little device enabled the taking of exact measurement for an impression, but the apparatus could not be introduced on account of a cicatrized ridge on the superior lip.

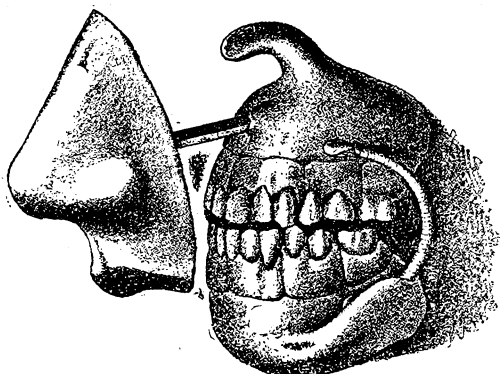


FIG. 2.

tial parts. The superior jaw carries, besides, an appendix destined to penetrate into the perforation to the palate and to serve as support for the horizontal branch supporting the nose.

"We should not deceive ourselves," says the author, "on the advantages of a prosthetic apparatus when the mutilation is so extensive, because we cannot hope to reestablish all the physiological functions of the buccal apparatus. To render phonation a little more perceptible, to prevent the overflow of the saliva outside of the mouth, diminish the horrible aspect of the physiognomy, facilitate mastication, in a feeble measure—this is what can be obtained, and it is something worth considering."



FIG. 3.

Fig. 3 gives a photographic representation of the face, with the apparatus attached. Though the nose had sufficient fixity by its attachment to the superior portion, it was deemed advisable to recommend eye glasses, in order to dissimulate still better the lines of union between the artificial nose and the skin of the cheek.

Thanks to this ingenious apparatus (which, by the way, in its construction approaches those of Prof. Ayrappää, reproduced in the *ITEMS* for April), phonation is intelligible, the outflow of saliva arrested, deviation of food a little checked, mastication, which, properly speaking, is impossible in the absence of bony supports, is perceptibly ameliorated, and lastly the general aspect of the face restored.

THYMOL FOR PULPITIS.

The question of substitution of thymol, in the form of crystals or powder, in pulpitis, for arsenic, was first discussed by Prof. Hartmann, about a year ago. The conviction has been expressed that this treatment preserves the pulp, not killing it as with arsenic.

Since then Prof. C. Rose has declared that subsequent experiments justify him in calling the attention of the profession to

it as a valuable addition to dental medications. In the last issue of the *O.-U. Viert. Zahn.* he describes the following case from practice :

The patient, a lady, twenty-three years of age, came to the clinic, complaining of severe pain in one of the lower left molars. A large carious hole extending to the gum was on the buccal surface. At its bottom lay the highly swollen, red, acutely inflamed pulp. It was treated with thymol, and filled with cement. In the first week a slight irritation was felt occasionally, in the treated tooth. Beginning with the fifth week it disappeared, and the tooth healed constantly and completely. After eight weeks the patient was induced to have that tooth extracted, under narcose. The operation could be performed without "dental" scruples, as the antagonists were missing in the upper jaw, and an artificial denture was to be prepared.

After fixation in sublimate and hardening in alcohol, the pulp was isolated by a careful bursting of the tooth, painted with carmin alum, imbedded in paraffin and spread in serial cuts of five to ten thick. The following was the result :

Of the pulp surface treated with thymol, about one-third of the pulp crown, and along the vessels, a central wedge of root pulp was infiltrated with pus. The pulp of the other root, as well as the greater part of the crown pulp, showed no changes whatever in the structure of a normal pulp. The tissue infiltrated with pus was sharply marked off from the normal. While in the deeper parts of the suppuration, the picture of the pure acute pus infiltration was overdrawn by numerous multiple leucocytes, among which only now and then a long corpuscle of the fixed connective tissue was visible; more and more of the very large typical phagocytes were appearing on the surface, all of which contained some leucocytes or remnants of their cell structures. Some of these phagocytes contained as many as ten red blood corpuscles in one cell. Phagocytes are very large single grained cells, which proceed from the fixed cells of the pus infiltrated connective tissue. They possess the property of absorbing and digesting the multiple pus corpuscles which are no longer able to regenerate.

It is evident, from the results so far obtained, that thymol has produced in the above pulp a partial aseptic suppuration, which was on the way to heal through granulation. It is to be hoped that if further investigations yield similar favorable results, we will have in thymol a remedy which, if not a complete substitute for arsenic, often will make the latter dispensable.

OUR MONTHLY GOSSIP.

By W. E. Blakeney, D.D.S.

THE HEART is a muscular organ which can be developed and strengthened like any other organ or muscle.

TEETH ARE different from every other structure ; the laws, therefore, governing other structures are not all applicable to them.

HYPODERMIC SOLUTIONS should be prepared with the utmost care, so as to exclude as much as possible all micro-organisms.

I WISH some one who has had experience in the use of mat gold would tell me his opinion of it.

"TUMEFIED GUMS," says Dr. Schumann, "are usually treated without the use of any knife, and will yield permanently to local and systemic treatment."

EXPOSURE OF the dentine causes an irritation of the dentine fibrils indicated by an uncomfortable sensation in the use of cold and warm drinks, and pressure in mastication.

DR. W. G. BEERS is of the opinion that the careless use of arsenic has contributed, in no small degree, to the death of pulps in good teeth, when used for hypersensitiveness, and in the adjacent sound teeth when used to destroy a pulp.

"IT IS with an exaggeration," says Dr. Barrett, "when we declare that the duties which fall to the dentist are among the most important of those entrusted to man."

DR. E. C. KIRK has made an analysis of the cobalt and cocain which Herbst has recommended in pulp treatment, and finds that it consists of pure arsenic, and nothing else save cocain.

"CHEMICAL THEMES," says Dr. Barrett, "should form the basis of more of our papers and discussions. We should strive to become competent to take up so-called chemical laws, and examine them carefully and intelligently.

"IN WATCHING for the turning points in our physical existence," says a popular authority, "there are no organs that tell the tale so unmistakably as those with which it is the special province of the dentist to deal."

THIS IS the age of the specialist. A thing that will impress itself on the thoughtful observer is the fact that every branch of science and industry, as seen in the great Fair, has been split up into minor departments.

DR. T. S. HILL is reported to have said : " Let us be mild and obliging ; let us be agreeable ; always good tempered ; always kind ; always neat ; and, above all ; always clean." Yes, let us, and be saintly, too, if possible.

"ACONIT," says the editor of *Dental Office and Laboratory*, "combined with equal parts of chloroform, gives almost instant relief from pain after the extraction of a tooth, when applied on a pellet of cotton in the socket of the extracted tooth."

BICHLORID OF MERCURY is obtained by subliming a mixture of chlorid of sodium and mercuric sulphate. It is in the form of white crystals. It requires from fifteen to sixteen parts of water to dissolve it, but it dissolves more readily in alcohol and ether.

A CONNECTICUT State officer says : " No medical license is required in that State. The only requirements are that the man must appear to be thirty years old, and act as if he was possessed of ordinary common sense." The land of wooden nutmegs must be a paradise for quacks.

SCARCELY THE point of the finest needle can enter a muscular or secretory tissue of the whole body without coming in contact with some nerve, fasciculi, or fibers forming the periphery of the nervous system, and, like a constant monitor to the sensorium, warns, with lightning speed, of the intrusion.

DR. E. C. KIRK uses sodium peroxid for bleaching discolored teeth in two ways : First, By saturating the dentine with a strong solution, following this treatment with a dilute acid ; Second, By first neutralizing the sodium peroxid with an acid, and afterward saturating the dentine with this neutral solution. " The first," he says " has yielded the best results."

It is said that "cases in which an acute pain follows the filling of a tooth, the pulp of which is in an irritable condition, a hot foot bath of twenty minutes' duration before going to bed will, generally, give permanent relief." Where is the authority for filling a tooth while the root is in an "irritable condition?"

THE CORK CONES, in Dr. Barker's practice, have taken the place of the scraper and file in finishing up rubber plates. "It is an actual fact," he says, "that I have not filed or scraped a plate in months ; these cones do work much more rapidly than the file and scraper can do it, and it is done better, there being no gutters or uneven places."

IN THE opinion of Dr. W. G. Beers, "when a fistula from an

abscess opens on the face, it is better not to extract, if extraction is necessary, till you make an artificial fistula inside the mouth. The outside fistula will heal by granulation. If, on the other hand, you extract the tooth before you do this, the tissue will be depressed, and an ugly scar result."

THE GOLDEN nail, which marks the completion of the Woman's Building at the Exposition, required several weeks of constant work to make. It is composed of gold, silver, and copper, and a Montana sapphire is set in the upper portion of the shield, which is attached to the nail near the head. Mrs. Potter Palmer, President of the Board of Lady Managers, drove the nail of gold home with a silver hammer.

DR. G. C. ANTHONY's method of capping pulps is to "dissolve sufficient gutta-percha in chloroform to half fill an ounce bottle. Add oil of cloves, 20 minims; tannin, 10 grains; carbolic acid, 20 minims. Seal and shake till satisfied of a perfect mixture; then open and allow the chloroform to partially evaporate. There will remain a putty-like mass, which is always ready for application." [This is good.—ED. ITEMS.]

"WE HAVE two preparations," says the *Medical Exchange*, "which we can rely on as faithful detectives: Marchand's peroxid of hydrogen, and potassium permanganate. The former, used in the fifteen volume solution, will cause violent effervescence if pus be persistent, and will continue to do so till all the pus has been destroyed. Potassium permanganate in a 10-grain solution (10 grains to 1 ounce water) will turn from a bright purplish-red to a dirty-brown color in the presence of any disorganized organic matter."

DR. W. G. H. BONWILL believes that clasps can be fitted so as to prevent wear and caries. "The metal," he says, "should be platinized gold only, without any lining, of pure or 22-karat gold soldered on it next to the crown. The metal should be loosely fitted to the crown on the plaster cast, and afterwards fitted in the mouth directly on the tooth, and made to touch in at least four places. It should not fit accurately every inequality."

DR. J. B. HODGKIN contends that the ideal rubber-plate is the gold-lined plate of the Daly method. "In this," he says, "we have all the advantages of pure gold and it is worth while to consider if pure gold here is not better than the ordinary 18-karat of which most swaged plates are made,—in contact with the tissues; and this lining is as smooth and solid as a swaged plate, and yet as perfectly adapted to the surface as the rubber."

OUR QUESTION BOX.

With Replies From The Best Dental Authorities.

[Address all Questions for this Department to Dr. E. N. Francis, Uvalde, Texas.]

Question 100. *The second, left-lower temporary molar of a girl of five years was chronically abscessed. In removing the tooth by the attending physician the gum was laid open, separating it from bone antero-posteriorly for about one inch; no pus was found. About a week later the abscess pointed outside, below and a little anterior to the tooth socket. After some sloughing of process, and unknown local treatment, the interior of the wounds healed nicely, but the outside opening discharged pus for nine months, during which another abscess pointed midway between the angle of jaw and corner of mouth; and the first external opening soon closed. The patient is now eight years of age, and the last opening shows a round scar of new tissue, the size of a nickle, with small secondary opening in the lower margin of new tissue, with slight discharge of pus daily, and a slight swelling of face, gums and mucous membrane. It has no sign of inflammation; the pulp of the sixth year molar is dead. The treatment proposed is extracting the molar, washing out the socket with peroxid of hydrogen, followed by sulfuric acid ten per cent., this to be cleansed out well in thirty minutes, followed by a listerin wash. What is the trouble, and is the proposed treatment correct?*

I think the proposed treatment good, though it should be varied to meet indications.

J. W. Gale, Chippewa Falls, Wis.

I believe it is a chronic abscess of the sixth year molar now. Extract and syringe thoroughly with warm water, then daily with sol. bichlorid hyd.

E. Ernest Murray, D.D.S., Boston.

The continued abscess is due to a dead molar. Per oxid and listerin treatment is O. K., but should not use sulfuric acid. If there is no dead bone, it should heal nicely with little further attention; but you are getting this girl badly marked. Can you efface the cicatrix in any manner?

W. E. Snyder, Amsterdam, N. Y.

I should say the trouble is caused from the sixth year molar now. Not seeing the case I cannot say what caused the trouble previous to the death of the sixth year molar. The treatment proposed would be all right by sacrificing the molar. If there was any anxiety to save the molar, I should remove the dead pulp and treat for an abscess.

Freemont Nye, Wickford, R. I.

I would extract the molar to make room, and probe to the seat of disease which is likely necrosed bone. Lay the gums open, and, after removing decayed bone, cauterize with nitrate of silver, and syringe with a weak solution of permanganate of potash, three or four times a day, and give the

patient a mouth wash of a little stronger solution of it, with instructions to use freely.

F. B. Rees, Cincinnati, Ohio.

Treatment to be exploratory, extract the molar, which unlikely will lead to a discovery of dead dental germs. Such being found, removal is indicated. Neither peroxid of hydrogen nor sulfuric acid should be used. Listerin would be good to use for its cleansing properties. By removing what is found amiss in the jaw, cure should follow of itself. A good wash and injection is:

R.—Tr. capsicum.....	
“ myrrh	āā 3 ss
Listerin.....	3 ss
Water.....	3 vj

S.—Hold in the mouth or inject.

J. E. Garretson, Philadelphia, Pa.

In my practice I have had five cases of external fistulous opening, caused by abscessed teeth. They have all readily healed after extraction without further treatment. In this case, I think the trouble comes from the molar; the death of pulp having been caused indirectly by the bungling extraction of the temporary tooth. If that is not the case then the bone must be necrosed. The proposed treatment is good, and may be all that is required, but should it fail I would use the acid quite often, and possibly alternate it with chlorid of zinc.

C. H. Haines, Dexter, Me.

Removal of temporary molar relieved the abnormal condition then present. Incipient caries attacked the permanent first molar previous to eruption, and this being allowed to progress eventually caused the death of pulp, which resulted in the existing abscess with fistulous opening. Considering the age of patient, the amount of suffering and inconvenience already experienced, I would advise the removal of molar and strict anti-septic treatment about as you suggest, with care regarding the eschar which will result on the external surface. The molar should be saved if possible, and the course that I would pursue for its salvation is the same as contained in the article on page 99, vol. 14, of the ITEMS.

W. T. McLean, Cincinnati, O.

Question 101. *Should an abscessed tooth be extracted at any stage? If not, why not? When is the proper time for extraction?*

An abscessed tooth may be extracted at any time.

J. E. Garretson.

Yes. If you wish the tooth removed and there is no hemorrhagic diathesis indicated.

W. E. Snyder.

I extract abscessed teeth in any stage. I can see no good reason for delay.

C. H. Haines.

There is no good reason why an abscessed tooth should not be removed at any stage. The retention may cause more trouble than the extraction.

E. Ernest Murray, D.D.S.

I do not hesitate to extract an abscessed tooth when the patient can not be persuaded to have it treated and saved. I prefer to extract when the suppurative stage is complete.

W. T. McLean.

Best to save all teeth you can, but you can extract at any period. After extraction, fill socket with pledget of cotton, first saturated in chloroform, and then in spirits of camphor. It will relieve all after pain. *F. B. Rees.*

I never hesitate to extract an abscessed tooth if I can not persuade the patient to have it saved. I always explain—if the face is not swollen—that it may be saved, and my failures have been few in ten years' practice.

Fremont Nye.

Have met but few cases where, having decided extraction was best, I did not proceed with the operation at once; though there are conditions which contraindicate immediate extraction, such as excessive general inflammation, debility, nervousness, or any other condition which it is thought extracting might exaggerate the trouble.

J. W. Gale.

Question 102. *A married lady, 28 years of age, has suffered with facial neuralgia of the left side for three years. One year ago the left cuspid became abscessed and was extracted. Up to this time the cuspid occupied the place of left lateral, the latter never having erupted. After the removal of cuspid the lateral incisor made its appearance and now is only half erupted, and facial pains continue, though partially stopped after the cuspid was extracted. What shall I do?*

I should like a more thorough history of case. It might be advisable to extract partially the erupted lateral. *E. Ernest Murray, D.D.S.*

Bring lateral down to its proper position by means of a plate and rubber bands. This will relieve tension and probably stop the neuralgic pain.

F. B. Rees.

Have never seen such a case. The pain may possibly originate from a decayed third molar. I must know all the symptoms to diagnose correctly, and even then it is sometimes difficult.

C. H. Haines.

Examine carefully every tooth on that side, upper and lower, for an exposed or dying pulp; also for an impacted third molar. Not yet finding the cause, look for exostosis, then for pulp irritation from pulp stones.

J. W. Gale.

Assist to complete eruption, the lateral, by mechanical means, and see if all other teeth are in a normal condition and vital. Treat systematically with aconitin $\frac{1}{200}$ gr. tablet, one tablet morning and evening till relieved.

W. T. McLean.

Experiment! That is all our highest authorities have been able to do with many cases of facial neuralgia, where teeth are free from disease, as this case is supposed to be. I shall be pleased to learn that some one has informed you of the correct thing to do, and shall read answers with much interest.

W. E. Snyder.

Never had a case of this kind, and can not give positive treatment. My judgment would suggest treatment of the gum surrounding the lateral with equal parts iodin and aconit, and wait results. If pain is severe, examine all the teeth, and if healthy, I should expect to find a dead nerve in the lateral which should be removed at once by drilling into the pulp chamber.

Fremont Nye.

TO THE READERS OF THE ITEMS:—Our experience and practice is so influenced by circumstances and localities that we can assist each other in many ways with original ideas and improved methods. We wish to obtain the opinion of ITEMS readers on subjects presented in daily practice, and will be pleased to receive the address of those willing to favor us with answers.

Question 103. *What is the best method of holding bands of crowns together for soldering? I use wire, but it makes a black ring and is hard to polish off. The wire is good, with this objection.*

The bands can be held by clamps, forceps, wire or investment. Good binding wire prepared for this purpose is free from the above objection. Bands can be soldered over an alcohol burner without the use of a blow-pipe, and require but little heat, if small pieces of solder properly placed are used.

Question 104. *For a lady thirty-five years of age, with the pulp of lower bicuspid exposed, I have applied arsenic twice, allowing it to remain four days each time with no effect whatever. The pulp is exceedingly sensitive and bleeds freely. What can I do?*

With patience carbolic acid will accomplish wonderful results. Try glycerin and tannin, allowing it to remain in the cavity a few days, then cleanse thoroughly and apply arsenic with oil of cloves.

Question 105. *In vulcanizing, when the heat is run up very rapidly or very high, it is common to find the plate completely honey-combed and utterly useless. In the course of many years practice I have had this experience from carelessness. There is, however, one peculiarity, viz.: When pink rubber or mottled rubber is used, in combination with the ordinary base plate, in no instance has the pink or mottled been effected, either in color or density. Is it attributable to the pigments used, or what?*

Care needed in the time of heating rubber to the vulcanizing point must be increased by the purity of rubber used. The dark rubbers often require from forty-five minutes to one hour or more, and much benefit is derived in vulcanizing two hours at low temperature. The bright red rubber contains vermilion, and foreign substance can be added to reduce the vulcanizing time to fifteen minutes. Pink rubber, besides containing vermilion and sulfur, has about one-fourth its weight of oxid of zinc added, thus reducing the percentage of rubber and care in vulcanizing. The latter is often of better color if quickly vulcanized, but the dark or purer rubbers require slow increase of temperature to allow the escape of gas, and it is sometimes advantageous to add vulcanite filings, to thick portions of plate where much space exists between model and teeth.

Dr. E. T. K. :—Similar questions have been answered in back numbers. Apply nitrate of silver.

Question 106. *What kind of platina do you use for backing up bridge-work?—pure or alloyed? What do you invest teeth in to keep them from checking?*

Thin backings of pure gold or pure platinum should be used—sometimes gold lined with platinum.

The investment depends somewhat on the case in hand. Try calcined marble dust, two parts, and plaster one. After soldering and heating, cover the case with tin box iron, or anything that will hold the heat and protect the work from chilling, and *never* remove till *cold*.

Question 107. *I would like an opinion on an M. D. practicing dentistry?*

The trial of Dr. J. R. Phelps, M. D., for practicing dentistry without a license, was held in Wheatland, yesterday (February 10th, 1893), before Justice Mannell and an intelligent jury, and excited considerable interest.

William Amick and three other witnesses were examined to prove that Dr. Phelps had done work for them.

I. N. Aldrich produced the county clerk's record to show that Dr. Phelps had recorded his license to practice as a physician, not as a dentist.

For the defense, County Physician Stratton, Dr. Milton and Dr. Grant were examined as experts to prove that there was nothing in the Dental Act to prohibit any practicing physician from practicing dentistry, as it is a part of surgery.

Dr. Phelps' diplomas were admitted in evidence for the purpose of showing that he has been practicing dentistry as a specialty in connection with that of medicine.

The case was argued at considerable length by counsel.

The jury rendered a verdict of not guilty.

For the following reasons we do not place your question in Question Box for answers:

The opinions gleaned on the above would be individual ideas of right and wrong, not based on legal grounds.

Each State has its laws, and some are so arranged that loop-holes are easily found by a lawyer of average intellect.

Many State laws regulating dentistry, allow physicians to practice some branches, coming under the head of dental practice, and their standing as medical practitioners allow them other privileges coming under the same head.

An opinion on law, even by an expert, is often unreliable, if it is to be tested before a jury. An opinion could not be easily expressed without a knowledge of the intimate particulars, and the name of State in which the trial took place.

A member of an intelligent jury once, before which a man was being tried for murder, expressed himself in our hearing, thus: "The witnesses in this case seem to know more about it than anyone else, and I move by — that we hang every d—d one of them." Such is what sometimes passes for law.

EDITORIAL.

SENSITIVENESS OF DENTINE.

Dr. W. C. Beers, in the April *Dominion Journal*, says:

Microscopically, we observe that the dentine is a structureless matrix impregnated with lime salts. Any pretence that the matrix *per se*, is living protoplasm, or that it can in any way display vital phenomena, is a hypothesis incapable of proof.

If the writer means that there is no sensitiveness in the mere minerals of the dentine, no one will dispute him; all will go farther, and say there is none in its animal ingredients. There is none in the mere substance composing any part of the body. Yet, wherever there is sensation there is life, and wherever there is life there is circulation, not only of nervous fluid, but of blood; and how can we have blood and nervous energy without blood-vessels and nerves? The nerves are the only cause of sensation; there is sensation in no other tissue. Yet even these are only the medium of sensation, they have no sensation *per se*; that is, in and of themselves.

The doctor's description of the structure of the dentine to prove it has no sensation is no disproof, but comes exceedingly near a proof. He says:

From the pulp cavity to the periphery, the entire dentine is perforated with numberless small tubes or canals, having distinct walls; each tube starting by an open circular mouth on the surface of the pulp cavity, radiating in an undulating course, giving off many branches which freely anastomose or communicate with each other, something like the arteries and veins of the body; but which do not reach the periphery of the dentine, as each tube becomes smaller and breaks up into branches at a little distance beneath the surface of the dentine. Sometimes, as an anomaly, these tubes pass into the enamel and cementum. Each tube has a definite wall or lining that may be demonstrated, even in fossil teeth. The tubes are not mere bony canals or ducts in the matrix, like pipes put through chalk, but each tube is lined with a definite and delicate, and yet indestructible structure, the "dental sheath of Neumann." You may boil dentine in caustic alkali; you may reduce it by concentrated hydrochloric acid; you may submit it to putrefaction, and though you destroy the cartilage, and leave it a slimy and shapeless mass, the sheath of Neumann remains intact. But neither of these structures explain the so-called sensitiveness of dentine. The tubes were once supposed to be solid fibres; afterward it was thought they were the conveyors of a nutrient fluid; but Tomes proves that they are occupied by little soft fibrille, which, like nerve filament, conduct sensory impressions to the pulp. The fibrils are processes, or prolongations of the odontoblasts, which are situated on the periphery of the pulp, lining the

pulp chamber. No true nerves, or nerve fibrils have ever been demonstrated in dentine; but fine nerve filaments are found close to the odontoblasts, and they communicate to the sensorium the sensation made on the protoplasm of the odontoblasts through the injury to the fibrils. It is not even necessary to assume that fibrils are nerves, before recognizing that they can communicate sensation.

Could he come nearer proving "the so-called sensitiveness of the dentine" without really demonstrating it? These "little soft fibrille, which, like nerve filaments, conduct sensory impressions," that he finds in the dentine, are a modification of nerves. Because, in their environment in this bony structure, they have not a fleshy coating, as in the muscles, is not against their existence. The doctor admits "the entire dentine is perforated with numberless small tubes or canals having distinct walls," "each tube, starting with an open circular mouth on the face of the pulp cavity, radiating in an undulating course, giving off many branches which freely anastomose or communicate with each other something like the arteries and nerves of the body," and that these tubes are "lined with a definite and delicate sheath," "occupied by little soft fibrille, which, like nerve filaments, conduct sensory impressions." This is as much as can be said of the nerves anywhere. They have no sensitiveness of their own. They "only communicate sensation," as this writer says they do in the dentine. You may cut a bundle of them asunder without producing as much pain as in cutting so much muscle. Even the pulp may be exposed by the breaking off of the tooth, and be without sensation when first exposed. There is no sensation in matter *per se*, and the nerves are not the medium of sensation, except from their infinitesimal extremities, where the motor and sensory nerves anastomose. The severe pain of a tooth is from a pathological condition. We sometimes speak of its pulp being the nerve of the tooth, but it is not any more its nerve than its artery or vein. It is only the pulpy organization in which the nerves and blood-vessels ramify—nerves and blood-vessels so minute they cannot be seen with the naked eye, except when in a state of inflammation. Even by the use of the microscope they can be seen, as this writer says, "entering the dentine through the tubes," though he admits that the fluid found in the canals (which is similar to that found in nerves elsewhere) is the medium to conduct sensory impressions to the pulp. But he finally admits that:

However, there is no doubt but that the sensitiveness is due to the presence of the tube contents, whether nerve fibres enter or not. We are

still ignorant of a great deal as to the peripheral distribution of the nervous system, and it would be rash to say that we know all about the nerve structure of the tooth. Only recently a new addition was made to our knowledge of muscular tissue, and it is quite certain, that if any of us live ten years longer, we will know a great deal we do not know now as to the structure, mode of action, and functions of the more complex nervous system.

Sensation in a tooth is a positive proof of life, and therefore of the presence of nerves and blood-vessels with their normal vital circulation; hypersensitiveness is a proof that it can become inflamed.

But this author believes there can be, in some tissues of the body, sensitiveness without the presence of nerves. We think not. He inclines also to the belief, that "sensitiveness of the dentine is purely physiological." We are glad to have him finally admit that it is sensitiveness, and not merely, what he first asserts, "so-called sensitiveness." But we would remind him that every tissue of the body is subject to pathological, as well as to physiological, conditions. The hypersensitiveness of dentine is a pathological phenomena. Therefore it is well that he adds, "but we cannot assert that this sensitiveness of the dentine is never pathological."

But stop, though he thus admits of sensitiveness of the dentine, and even of the possibility of a pathological condition of hypersensitiveness, he closes his article thus:

In conclusion, we have an instinctive dislike to the use of the term "sensitive dentine." "We do not mean what we say when we speak of sensitive dentine." "We call the epidermis 'sensitive,' but it is only the nerve filaments that are sensitive." That is right; and so it is in the dentine. "There is no sensation in the lime salts," but running all through the lime, are "nerve filaments that are sensitive." "We know very well that the sensitiveness is due to the contents of the tubuli, which transmit sensation to the pulp." So, as with many another controversy, as far as we seemed to diverge at first, we at last come together.

We complain because we are not a genius, we sigh because we are not rich, and we excuse ourselves from doing anything above mediocrity because we have no gifts. But laziness is the greatest obstacle to success. There are few of us who might not succeed. We get ingenuity and gifts and riches and honor by study and industry. These are the foundations of fortune. But with these

defective, the possession of any or all attainments will be of little comfort or stability. There is no skill without intelligent-persevering industry. It is hard knocks on the anvil of brain and muscle that make the sparks of genius fly.

Besides, if you do not work the devil will, and he will make you his workshop. In you, on you and all about you will be seen a specimen of his labor—the ruin of what might have been a fine edifice, a noble home, an honorable monument of your life work.

How often we are surprised at the gradual rise of some young man to prominence, while we have made but little progress. We say, "we were not aware there was anything special in the fellow." There was not anything more in him, perhaps, than in ourselves; but his gifts were made active, while ours have remained dormant. There are the elements of some kind of genius and greatness in each of us, though most of us are too lazy to bring it out. If we could see the secret springs of this young man's final prominence we should find it was by hard study and hard work; and the same path is open to us all.

Of course, there is a great difference by birth, but a greater difference comes by the way we spend our time.

REPUTATION VS. CHARACTER.

Most of us are very sensitive of our reputation, as well we may be, for as Shakespeare says, "He that steals my purse steals trash, but he that steals my good name steals all." There are few things in which we should use more caution than in keeping our own reputation unsullied, and that of our neighbor's a little better, if possible than they may bear, especially if he is an enemy or a competitor—the effort will improve our own reputation as well as his.

If we were more careful of our character, our reputation would take care of itself, or at least we should have less trouble with it. We are usually rated for as much as we are worth. It may be, if our neighbors could look into the windows of our heart it would not at all increase their estimate of us. No wonder we leave the blinds up so often. But even if we are really better than people believe us to be, time will generally bring things right. Therefore those who have trouble with their reputation will do much better in mending it by putting things to rights at home than by going about seeking its improvement abroad.

Christ compared us to a wheat field. We fear, however, some of us have the field without the wheat. It is no wonder therefore the field grows up to tares. But even if, in spite of our best efforts to raise a crop of wheat, some enemy sows tares among it while we sleep, it will require much caution if we would root them up. We have had a little experience in that. Our wheat field has been sown with tares, though we thought we were very careful in protecting it; and in our anger we have worked so indiscretely to tare them up that we did much injury to our wheat. We hope others have been more successful. But while we can, by this occurrence, sympathize with others, we feel like admonishing them against our mistake. Brother, be sure your field is thoroughly prepared and well sown to wheat, and that it is well looked after. This helps much to keep out the tares, and generally chokes them if they are thrown in, specially if the wheat is sown early in the season.

Those who are wont to sneer at the efforts of students to improve and simplify the orthography of our own language, will derive very little consolation from the fact that the foremost literary nation of the world—France—is about to decide on a proposition of M. Gréard, to the French Academy of Letters, on a number of changes in orthography. Among these are two which especially commend themselves to writers on scientific subjects, since they relate to words mostly derived from Greek roots. He proposes to abolish the vowel y, and the diphthong ph, using i in place of the former, and f in place of the latter.

The *Revue Scientifique* initiates the movement by writing "fisilogie," instead of the prevalent spelling, and the *American Naturalist* "will follow the example of the above contemporary so far as it can do at present, consistently with the liberty of action of contributors and other persons, whose prejudices in favor of the old orthography it is necessary to respect."

It is needless to add that the ITEMS OF INTEREST has been advocating a reform on the same lines for many years past, and has adopted in the March issue the spelling of scientific terms in accordance with the sanction of the last chemical convention.

The readiness with which nearly all professional journals adopt these orthographical changes shows how easily more extensive changes would be generally adopted.

NOTES.

The physiological education of the senses is the royal road to the education of the intellect; experience, not memory, is the mother of ideas.

* * *

Man is born to health and longevity; disease is abnormal, and death, except from old age, should be accidental; both are preventable by human agencies.

* * *

A rare case of actinomycosis of the cheek and the right inferior maxillary, spreading to the right lung, is reported by Prof. Poncet, of Paris, France.

* * *

The rubber patent for dental purposes cost the dentists of the United States the enormous sum of \$10,000,000, while in force. Is there any wonder they are so very anxious to break up the odious tooth crown combine?

* * *

We hear repeatedly from dentists of high authority the prediction that gold crowns will not be put on so universally in the future as they have been in the past, because of the inflammation produced at the gingival margin of the gum from the collar. A condition which finally results in absorption of process.

* * *

There is no extravagance worse than buying poor goods because they are cheap. So with the dentist, it is poor economy to save money by having few or poor tools. Better by far be deceived occasionally by paying an extravagant price for a useless instrument, or in having more than needed, which are useful, than to be without one that might be of special benefit.

* * *

Dr. E. F. Hickman writes us concerning Dr. Gordon White's method of making gold crowns, as described on another page, that "Having had the pleasure of seeing him make make several of them I insisted on his giving his method to the readers of your journal, which he kindly consents to do. I was favorably impressed with the simplicity of his method, and the short time consumed in making them. I believe it will be interesting to your readers."

The difficulty of soldering aluminum, which is believed to result from the formation of a thin film of oxid on the metal, has been overcome by the use of a flux containing a small amount of phosphorus, which serves to deoxidize the surface, and leaves it clean. This solution was discovered by Mr. Joseph Richards, of Philadelphia.

* * *

Dr. Millim, from Africa, says the African teeth are very white, and he thinks this might be accounted for in part to the plain food on which the natives live. It is a common habit for them to clean their mouth and teeth after every meal. Of course they have no tooth brushes, but they use a soft wood soaked in water. Many tribes inland file their incisors to a point.

* * *

The venerable Dr. Flagg used to say, a good many years ago, that, in filling a root, the thing to be done, was to close the apical foramen. If that is done it don't make much difference what the canal is filled with. His practice is much easier than with platina,—filling the canal with cotton. I have filled them in that way. Some of them have stood fifteen years, and they have done, I think, about as well as others that were filled in other ways. The point is to exclude moisture, which carries the germs of infection.

* * *

Dr. Pierce claims to have had good results in the treatment of pyorrhea alveolaris with the following preparation: "I take," he says, "aristol in a wide-mouthed bottle and put in equal quantities of tincture of iodine, oil of gaultheria, oil of cinnamon, and carbolic acid. It is not gummy; the iodine cuts it and makes it creamy, so that it can be readily used, and it remains without change for days or weeks." This he puts down in the pockets with a small spatula.

* * *

DR. BARRETT takes an occasional peep into biographical history. During a late indulgence in this pastime he discovered that "Alexander the Great had teeth at his birth, and he was a drunkard and a neurotic. Cæsar, too, was born with teeth, and Cæsar was an epileptic. Richard the Third had teeth thus prematurely developed, and he was hump-backed." The learned doctor, has not, it is to be presumed, extended his investigations to the thousands of others having teeth prematurely, and who have not been noted for idiosyncracies.

A "skilful and educated graduate of a reputable dental college of California" writes, deploring the fact, that the State law will not recognize one possessing all essential qualities, without a successful examination before the State board, and yet, will allow mountebanks to travel through the State, extracting teeth under the nose of one of this very board, in defiance of law and justice. He cites the following as evidence: "It was a cold day for the tooth business, but Dr. Folsom extracted ninety-five. The doctor had a lame arm when the day's work was finished."

We suppose the secret is that the State law allows extracting of teeth without a dental certificate.

* * *

A good plan for preserving tools from rusting is the simple preparation employed by Professor Olmstead, of Yale College, for the preservation of scientific apparatus, and which he long ago published for the general good, declining to have it patented. It is made by the slow melting together of six or eight parts of lard to one of rosin, stirring till cool. This remains semi-fluid, ready for use, the rosin preventing rancidity and supplies an air-tight film. Rubbed on a bright surface ever so thinly, it protects and preserves the polish effectually, and it can be wiped off nearly clean, if ever desired, as from a knife blade; or it may be thinned with coal oil and benzin.

* * *

Under "The Use of Gutta-percha," in April *ITEMS*, we made its author a professor in the Philadelphia Dental College. This was our mistake. Dr. Cheney, in his letter accompanying the manuscript, signed himself only as "of the Philadelphia College," and we mistook this to mean, he was one of its teachers. There are some points in the article with which we did not agree, but as we supposed it was inspired by Prof. Flagg, of that college, the well-known champion of plastics, we accepted it as from Prof. Flagg himself. But the professor writes us that we have not only made the mistake of the author being a teacher of that college (which Dr. Cheney is also prompt to correct) but that there are statements in the article regarding gutta-percha "that are not at all in consonance with the teachings regarding gutta-percha in that school." We hope Prof. Flagg will give the readers of the *ITEMS* his valuable experience in the use of this increasingly popular filling. There is no better authority in the world.

FOR OUR PATIENTS.

SO THE WORLD GOES.

John A. Joyce.

Laugh, and the world laughs with you ;
Weep, and you weep alone.
For this brave old earth must borrow its mirth ;
It has trouble enough of its own.
Sing, and the hills will answer ;
Sigh ! It is lost on the air ;
The echoes bound to a joyful sound,
But shrink from a voicing care.

Rejoice, and men will seek you ;
Grieve, and they turn and go ;
They want full measure of all your pleasure,
But they do not want your woe.
Be glad, and your friends are many ;
Be sad, and you lose them all ;
There are none to decline your nectared wine,
But alone you must drink life's gall.

Feast, and your halls are crowded ;
Fast, and the world goes by ;
Succeed and give, and it helps you live,
But no man can help you die.
There is room in the halls of pleasure
For a long and lordly train,
But one by one we must all file on
Through the narrow aisles of pain.

ADVERTISING EXTRAORDINARY.



TEETH. TEETH.

If you want a set of teeth,
get another person who wants
a set, and come both at the
same time, and you will get
them for \$5 a set.

One person out of fifty who
gets a set of teeth stands a
chance to get a present of a
Ladies'

HANDSOME GOLD WATCH.

And every person getting gold fillings or crown-work
stands a chance to get a present of a

SOLITAIRE DIAMOND RING.

Teeth extracted without pain—and gold fillings done
evenings by electric light.

ELDORADO DENTAL OFFICE, 51 Third avenue, near
Tenth street, New York. Dr. D. E. RUGG.

UNNECESSARY PAIN IN DENTAL OPERATIONS.

Dr. James A. Reilly.

One forenoon during my senior year at the Harvard Dental School, and while in charge of the dental department of the Bennet Street Dispensary, among the numerous patients was a lad of twelve or thirteen years. He went through the usual preliminaries required to have an inferior bicuspid tooth extracted. The operator mechanically picked up his mirror and pliers to examine the tooth, or what remained of it, and almost simultaneously with their introduction into the boy's mouth there was a terrific scream and a plunge that almost carried him through the window. An attempt at extraction by a street dentist had resulted in the removal of the crown, leaving the entire coronal portion of the pulp standing unprotected. The dentist simply plunged his pliers into the mass of living tissue. Was not that an abuse utterly reprehensible on his part? I think it was, and so would you, I believe, had you been the sufferer. Yet we are doing just such things every day in one form or another.

That "familiarity breeds contempt" is nowhere more noticeable than in the use of dental instruments and appliances. Not long since, a gentleman somewhat prominent in dental organizations, told me he had not a dozen excavators in his possession; that he excavated all his cavities with the aid of the dental engine, and wished to wager me that I could not find a cavity in a tooth that he could not reach and prepare as well, if not better, with the engine than it could be accomplished with hand excavators. On being questioned if his patients did not complain of being hurt, he replied: "Confound the patients! my duty is to protect myself." If this gentleman could but be patient and operator at the same time, I have no doubt he would be easily induced to trade some of his burs for hand excavators. Has he not, to say the least, become to "familiar" with his engine?

A prominent writer says, if it is at all difficult to apply, the rubber-dam should not be used in the cases of the very young, very sensitive, or very nervous patients. How many of us draw the line at these classes? It is not my intention to point out the occasions for its use or to urge on you its abandonment, for I consider it a *sine qua non* to good results in numberless cases. But I would like to call your attention to the contempt for your patients' feelings that a "familiarity" with its application breeds.

You are all aware how quickly you jerk your head away if by

accident the floss slips too rapidly between your own teeth and burrows itself in your gums. How often the same thing is perpetrated on your patients, and nothing thought of it by you, while you are laying coil after coil of cable on teeth that often do not require ligatures! Frequently, indeed, they serve only to obstruct access to the cavity. With holes of proper size and shape in the dam the employment of ligatures is seldom necessary.

It once fell to my lot to sit in the chair with a clamp on a lower wisdom tooth, compelling me to keep open house during the space of three and one-half hours. My knowledge now teaches me that it was entirely unnecessary, and that the cavity might have been filled, with the aid of napkins, in less time than it took to get the rubber and clamp adjusted, and with infinitely less pain and discomfort.

I once saw a case of regulating that was worthy of the attention of the Society for the Suppression of Cruelty to Children. The teeth were very much displaced, and appliances were adjusted to almost all the teeth simultaneously. Too much force was applied, and too long an interval allowed to elapse before changing, so that when I saw the mouth there was scarcely a tooth in the upper maxilla that could not have been easily removed with the fingers. For articulation the patient could not bring the teeth together without suffering intense pain. And all this under the direction of a reputed skilful operator.

Operations really painful, though to us they seem very trifling, which our patients shrink from, we are prone to ascribe to fear or timidity, when we really are inflicting pain. By the habits of some dentists one would suppose the patient had no rights the dentist is bound to respect. He lolls over and leans on his patient, making of their head or their breast a cushion and support for his arm till the patient is well nigh exhausted. It does not diminish the discomfort any to know that it is sometimes done unconsciously. That much inconvenience and unnecessary pain are caused by our neglect to scrutinize our processes and individual peculiarities, or by failure to keep them before our eyes, is not to be denied. Is not unnecessary pain frequently caused while putting on gold caps, bridges, and collars for crowns, without first applying cocaine to the gum margin? Is it not unnecessary pain to continue nibbling at an exposed pulp that had not wholly succumbed to the arsenious paste? To catch the lip beneath the thumb while making it a fulcrum against the teeth is painful, and to wash a cavity with cold instead of tepid water may produce avoidable pain.

How common an experience it is to hear an outcry, or see a twitching of the head and body immediately on using the chip-blower while excavating! It does not take place so much if we use warm air. Yet, do we always use it? Is it not positively abusive to whack away at a tooth for hours with the automatic mallet, when hand-pluggers might be used with so much more comfort, at least during the first part of the filling? Is it not an abuse to inflict quick wedging as ordinarily performed? Is it not an abuse in taking full impressions for artificial dentures, to overflow the plaster from your impression-cup into the throat of your patient, when a smaller quantity would produce a much better result by giving a more accurate impression, because the parts are not so likely to be disturbed by retching and coughing? Is it not abusive for a dentist having a strong, muscular hand, with a heavy touch and a vise-like grip, to rush and hurry through with his work as if he were under the impulse of electricity? Rapid operators hurt more than slow ones. I believe after a fair rate of speed has been attained, any acceleration of it is obtained only at the expense of delicacy of touch and of the patient's nervous system.

It is within the ability of everybody to cultivate a delicacy of manipulation, if they do not naturally possess it, and delicate manipulation is a powerful factor in dispelling the dread so universal in the minds of the people relative to dentistry. As President Elliot said the other day at the meeting in behalf of Harvard's new dental school: "It is the dread of pain which makes people miserable."

Dental Journal.

PHYSICAL TRAINING.

That boys and girls are chiefly able to learn their relations in life, the nature of objects, and the properties and qualities of things by the tactile power. That power interprets our wants and also aids in meeting them. The tool is a specialized hand, a refined adaptation of promiscuous muscularity, a trained muscular power. But manual training does not stop with merely a trained muscular power. In the process of that training, what changes are making in the boy himself? I must urge you to examine for yourselves what those changes are. There is not a branch of study usually pursued in schools which is not made of more direct use and to serve a clearer ethical purpose because of manual training. Manual training is only mind training.

To men in your profession the introduction of manual training

into the fitting schools is more plainly defensible than to men not trained to be mechanical experts. What value would you attach to manual dexterity alone in the training of a dentist or a surgeon? As you intend to lengthen the term of your college course to three years, what value will manual training have for those who come up to pursue your enlarged and composite course. Are the young men who seek admission into your profession now well trained in the use of tools? Are they expert in the manual work required in your courses as they now are? Are their minds able to execute accurately the plans which even a person of average mental powers can plan? I state the whole problem of manual training when I ask, does that training help a person to think? Thinking is training. Manual skill supplements clear thinking, but the processes of thought and manual training must proceed together; they cannot be divorced; a mindless surgeon or a mere theorist in surgery is alike unfit to practice his profession. If you advocate the introduction of manual training into the fitting schools, you advocate the improvement of the profession to which you belong; you raise its standard of utility, you equip its schools with trained material, and you meet the wants of society more perfectly than those wants are now met. Given manual training in the fitting-schools, and every medical college and every dental college in the country will become in time the training-ground for future experts, and not only of the experts, but also of that larger number in the profession who are not experts, but only safe surgeons or dentists. The result will be that the average practitioner under such a condition will equal the expert under the present *regime*. *Prof. Thorpe, in Review.*

"Your teeth are as beautiful as artificial ones," said the young man to his best girl.

"Are they not better?" was the reply.

"Well, yes; I suppose they are," he admitted; "but artificial teeth are very fashionable nowadays. And in fact scientists, and artists, and professional men of all classes are seeking to transcend nature in many of their efforts. I sometimes think they will give us artificial husbands and wives by and by."

"That is true. Some men are not satisfied with even a wife that is only what nature has made. They want considerable of the artificial thrown in in the shape of golden images. And sometimes they are attracted more by the gold than the girl."

NOTICES.

The Pennsylvania State Dental Examining Board will meet for the transaction of business at Cresson, Pa., on Tuesday, July 11th, 1893, and will continue in session for one day only.

I. C. Green, Secretary, West Chester, Pa.

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The next annual meeting of the California State Dental Association will be held in San Francisco, Tuesday June 13th, 1893, continuing four days, at the rooms of the Dental Department of the University of California. All members of the profession are invited to be present. *L. Van Orden, Recording Secretary.*

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THE MISSOURI STATE DENTAL ASSOCIATION.—The twenty-ninth annual meeting of the Missouri State Dental Association will be held at Excelsior Springs, Mo., July 11th, 12th, 13th, and 14th, inclusive. All dentists are invited to attend as the meeting promises great value to the profession.

Wm. Conrad, 321 N. Grand Ave., St. Louis, Mo.

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Owing to a change in the time of meeting of the World's Columbian Dental Congress it seemed a necessity to make a change in the time of meeting of the American Dental Association, and at the request of the officers of both the American Dental Association and the World's Columbian Dental Congress, I communicated with the officers of the former, and the vote was unanimous for changing the time of the meeting of the American Dental Association.

Therefore the meeting of the American Dental Association will be held in Chicago, August 12th, instead of August 15th.

J. N. Crouse, Chairman.

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THE WORLD'S COLUMBIAN DENTAL CONGRESS.—The Committees on Membership and Registration of the World's Columbian Dental Congress will be saved much trouble, and the applicants for membership much vexation, if the members of dental societies in good standing are furnished with credentials or certificates of membership, so that they may be presented at the desk, where intending members apply for their membership cards.

Advanced membership cards will be furnished on application to the Secretary of the General Executive Committee, or the Secretary-General of the Congress when the membership fee (\$10.00) accompanies the application.

A. O. Hunt, Sec'y of the Gen'l Executive Com., Iowa City, Iowa.

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COLUMBIAN DENTAL CLUB, CHICAGO:—The dentists of Chicago have organized the Columbia Dental Club for the entertainment of dentists visiting Chicago during the continuance of the Exposition. They have rented the entire house 300 Michigan avenue (about four squares from the Art Palace on the lake front), and it will be kept open daily for the convenience of dentists.

The club will be used as headquarters for the *World's Columbian Dental Congress* during the month of August, and perhaps after July 15th, 1893.

Dentists who contemplate a visit to Chicago, may have their letters addressed in care of the club. Members of the profession in Michigan, Illinois, Indiana, Wisconsin, Iowa, Missouri, and Kentucky, are invited to send pictures, bric-a-brac, and curios to embellish the rooms. Everything of value will be returned to the owners after the Exposition closes.

The profession in Illinois will furnish the Club House, and those who contribute fifteen dollars (\$15.00) will be entitled to a full paid non-assessable membership for the six months.

A. W. Harlan, Sec'y-Gen'l, World's Columbian Dental Congress.

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The last Dental Congress of Paris, in 1889, was composed of about 400 dentists, 225 French, and 125 foreigners. The foreign nations represented were: England, Germany, Alsace-Lorraine, Austria-Hungary, Belgium, Brazil, Denmark, United States, Spain, Cuba, Holland, Greece, Italy, Portugal, Poland, Argentine Republic, Russia, Roumania, Switzerland, Sweden and Norway, Turkey.

* * *

The eleventh annual meeting of the North Dakota Dental Association was held at Fargo, April 12th and 13th. The meeting was the most successful in the history of the Society.

Next meeting will be Grand Forks, June, 1894.

The following officers were elected for the ensuing year: President, D. B. McLain; Vice-President, E. M. Pierce; Secretary, R. B. Forster (Grand Forks); Treasurer, H. L. Starling.

At the annual meeting of the Chicago Dental Society, held Tuesday evening, April 4th, 1893, the following officers were elected for the ensuing year:

J. W. Wassall, President; J. H. Woolly, First Vice-President; Garret Newkirk, Second Vice-President; D. D. Davis, Recording Secretary; George J. Dennis, Corresponding Secretary; E. D. Swain, Treasurer; J. H. Smyser, Librarian.

Board of Directors:—Edmund Noyes, J. G. Reid, George H. Cushing.

Board of Censors:—E. R. E. Carpenter, D. C. Bacon, H. W. Sale.

George J. Dennis, Corresponding Secretary.

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REDUCTION IN FARES TO MEMBERS OF THE INTERNATIONAL MEDICAL CONGRESS TO BE HELD IN ROME FROM SEPTEMBER 24TH TO OCTOBER 1ST, 1893.—The North German Lloyd, 2 Bowling Green, N. Y., offers a reduction of twenty-five per cent to members going to and coming from the Eleventh International Medical Congress, on steamer Werra, which is to sail from New York on August 5th and September 9th, and on steamer Fulda, on August 19th. Both these steamers sail to Genoa. The same reduction will be made for the return trips in October and November, on the same steamers, and for the company's Saturday (off Bremen, Sunday off Southampton) steamers.

The Hamburg-American Packet Company, 37 Broadway, N. Y.; 125 La Salle street, Chicago, offers a reduction of twenty-five per cent, both out and return, for all its steamers during the year 1893.

The Compagnie Générale Transatlantique, 3 Bowling Green, N. Y., offers the rates which are allowed French officers—that is, \$63.50 for an \$80 accommodation, and \$91.50 for an \$120 accommodation.

Provision is also made for special reduced rates on the railways of the countries which the members of the Congress are to traverse.

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The twenty-fifth annual meeting of the Pennsylvania Dental Society will be held at Cresson, Pa., Tuesday, July 11th, 1893. Convenes at 10 o'clock A. M. One-day session.

C. V. Kratzer, Secretary.

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A special meeting of the Dental Examiners of Minnesota will be held in Minneapolis, July 6th, 7th and 8th, 1893.

Henry A. Knight, Secretary, Minneapolis, Minn.